THE

AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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WORK FOR THE MONTH.

JANUARY.

On this, the commencement of a *new year*, permit us to offer you the compliments of the season—to present you, in all singleness of heart, our sincere wishes that the present year, which you *have* just entered, may be pregnant to each and all, with the blessings which conduce to human happiness; that health may be the lot of you and yours, that your crops may be abundant, bring good prices, and that your happiness may be unchequered by any event to mar your pleasures.

As it is important to success that those engaged in tilling the earth should begin right, and do all things in the *right* time, and in the *right* way, let us conjure you, to enter into a firm resolve, *never* to leave for to-morrow, that which should have been done the previous day; never to give to pleasure that which belongs to business. The mind, as well as body, requires periods of recreation, and if our systems and plans are well matured, and properly adjusted, there will be time enough at the disposal of each, to prevent any interference with the one or the other.

In making our arrangements for the labors of the year, it is unsafe to leave them to the contingences of chance, or to defer the necessary preparations until the time may arrive for carrying them into effect; nor should we confide to *memory*, what should have its place on a *memorandum book*. Every farmer and planter should lay out his plans for the year in advance—note down the crop allotted to each field or lot, and so perfect his arrangements, as that each crop should be put in at the appropriate period, and that their workings should be so provided for, as that no delay shall occur to despoil his crops of their "fair proportions;" for so sure as two and two make four, so sure is it, that the culturist cannot, without suffering loss, delay attention to the cultivation of his crops. We have seen cases wherein a delay of only two or three days in the time of working the corn-crop, imposed additional labor of weeks. Weeds and grass, when they first make their appearance, may be removed with a shingle in the hands of a child, but if permitted to grow until their roots are hard set in the earth, will require the united strength of man, horse, and plough, to dislodge or uproot them, and not then, except at the expense of great labor and trouble, for these pests,—these blurs upon cleanly culture,—grow with a rapidity that defies all calculation. But if this additional tax upon time—upon the force of the farmer—was the only resulting evil, it would not be so bad; but such is not the fact; for *delay* has like "wine, a two-fold operation in it;" while it gives full scope to the expansion of the weeds and grass, it prevents the growth of the crop, among which it may be an intruder, at, perhaps, the very period when the plants require the largest liberty to push on in their growth, and when every day's nutriment appropriated for the use of such intruders, rob them of food essential alike to their luxuriance, and healthful production. As being intimately connected with the cleanly culture of what is termed hoed crops, we will mention, that no one should undertake to cultivate in such crops, more land than he has manure to enrich, force to plow deeply and well, and *force* to cultivate in a way calculated to promote and secure the continuous growth of the plants grown thereon, and the uninterrupted perfection of their fruits. It is a mistaken ambition, which prompts one, to desire to cultivate a breadth of acres, that throws him upon the necessity of indifferent culture; for there is nothing more true than this—it is a waste of time, and sacrifice of interest, to half-do any thing connected with the operations of husbandry. One acre liberally manured, thoroughly ploughed and pulverized, and neatly cultivated, will produce more than three acres which may not be manured, indifferently prepared, and slovenly cultivated, while the labor bestowed upon two of the latter acres, operates as an enormous tax upon the party who may have undertaken it.

Contenting ourself with these preliminary hints, we will proceed to point out a few of the many things claiming attention during the month

On the Farm.

Fire-wood.—If you have not a supply already cut down, and hauled into your yard, sufficient to last you and your dependents throughout the entire year, delay no longer, but proceed at once to cut and haul in as much as will complete the necessary complement.

Stiff Clays.—If you have any stiff clays that you intend for spring crops, plough them up this winter, in order that the operations of freezing and thawing may improve their texture. If these

should require liming, you could not desire a better time to apply either lime or marl than during the winter. Here let us repeat to you what we have often before stated:—Tenacious clays should never be ploughed when wet.

Grain-field-surface drains.—These should be carefully examined every week or so, and wherever sticks or clods of earth may be found in them, they should be removed, as every obstruction of the water at this season of the year operates disadvantageously to the plants.

Milch Cows.—These should be attended to with sedulous care. Thrice a day they should be generously fed and watered, and curried twice. They should be provided with comfortable beds, in a warm, well ventilated stable, and twice a week receive an ounce or two of a mixture of equal parts of lime, ashes, and salt. Besides hay or fodder to be given them thrice a day, they should night and morning receive messes of rich slops, made of corn and cob meal, or cob meal and roots, in which cut hay and straw should be mixed. It will be good policy to change these slops, occasionally, alternating them between those we have named and a bran slop.

Working Animals, of all kinds, should be well cared for throughout the month, be well fed, well cleaned, their stalls well littered, and regularly watered morning, noon, and at night-fall. Twice a week they should receive 2 oz. of the lime, salt and ashes mixture.

In-calf heifers and Cows.—See to it, that these receive liberal allowances of good fodder, hay, or straw, thrice a day—that their lodging places be dry, warm, and well littered, and that they have free access to a well littered yard, in which they can comfortably take exercise; and be sure to give them twice a week 2 oz. of the lime, salt, and ashes mixture. A few days before calving, it will be well to add slops to their daily allowances.

Brood Mares, in foal, should have a yard for exercise, have a shed, or stable, well littered to retire to, at pleasure, be cleaned daily, fed thrice a day with good hay or fodder, receive grain feeds night and morning, be watered thrice a day, curried and wisped down morning and evening, and receive 2 oz. of the lime, salt, and ashes mixture twice a week.

Colts and Young Cattle.—He that desires his young animals to reach their full size, or to have symmetry of form, must make up his mind to feed, and care for them well, during the entire period of their growth,—size, beauty of proportions, and elasticity of muscles, cannot be elaborated out of straw. Good hay, or fodder, dealt out with a liberal hand, thrice a day, and grain of some kind, night and morning, in moderate quantities, is absolutely necessary to build up their frames, give strength to their sinews, muscles, and thews, elegance and size to their forms, as well as to build up and harden their system of bones. During winter, they should be provided with comfortable sheds, well bedded stalls, and a dry comfortable yard to exercise in. Three times a day they should be watered, wisped down night and morning, and get an ounce of the lime, salt, and ashes mixture, thrice a week. The lime to be used in this mixture, should be oyster shell lime, if possible, as it contains bone-earth, a substance indispensable to growing animals.

Fencing.—If you have not already cut down and hauled into your barn yard a full supply of fence-stuff to last you throughout the year, proceed at once to complete your supply.

Gates.—We once more repeat our advice to you, that if your fields are entered by *bars*, have them substituted by good *gates*. The time to be saved in a month is worth more than a gate will cost.

Sheep.—See to these in the way we pointed out last month.

Mode of Feeding Grain.—Have all the grain you feed out to your stock either chopt or ground. It is more healthful to the animals, while one-fourth the grain may be thereby saved.

Corn-cobs.—Instead of selling your corn on the cobs, sell it shelled, and grind up the cobs to make slops for your milch cows.

Corn Shellers and Corn and Cob Crushers.—Every farmer should provide himself with these time and money saving implements. They will earn their cost in a single season; whereas, if well treated, they will last, with but little repairs, for a dozen years.

Straw Cutter.—This excellent *provender saver* should be an appendage to every farmer's barn.

Breeding Sows and Store Hogs.—Feed these carefully, and give them, in their yard, plenty of raw material to work up into manure. They are the best manufacturers of food for plants that we have any knowledge of, and make no trifling quantity themselves,—and that of the very richest kind.

The Family Sleigh, if not in tip-top order, should be made so for the accommodation of the ladies of the mansion.

Wagons, Carts, and Implements.—These should all be examined with care, repaired, if repairs be needed, and those not in use, carefully put away under cover.

Marl.—If you have any, haul it out upon your fields requiring it, to be broken down by frost, ready for use on your corn and oats grounds in spring.

Poultry.—Feed these liberally, give them occasional messes of fresh meat, or fresh fish, provide them with lime, ashes and sand, and they, in return, will supply you with eggs.

Poultry Dung.—Save all this in the way we have before laid down. Every pound of it, well preserved, we look upon as of as much value as guano.

Materials for Composts.—Devote your whole energies in collecting materials to form composts—let no seasonable time escape unimproved. Believe us when we say, that *mould is to soil, what blood is to the human system—its life-spring and source of vitality.* Collect then, all and every thing that can be converted into manure, for such purposes. In your selections of materials, you cannot well go amiss; any thing that once had life, will produce it again. Woods-mould, leaves, weeds, marsh-mud, river-mud, peat, muck, ditch scrapings, creek mud, road-scrapings, the mould of head-lands and fence sides and corners, though apparently dead, to the eye, all possess the power of recuperation. Give these substances to your hogs and cattle, to work into manure, and you need no better thing to restore fertility to your wornout lands, or maintain the fertility of those which are in good heart now.

Prices of Guano and Wheat.—At the present low price of wheat, we believe guano to be disproportionately high. The price of the one should regulate that of the other, to a very great extent.

We understand that there will be a change made during the present year, in the chief agency for the sale of guano.

WORK IN THE GARDEN.

JANUARY.

The season forbids much work to be done in the garden this month, still there may be something done calculated to facilitate the operations of early spring, and to these we will proceed to call your attention.

Stiff clay beds.—If you have any of these in your garden, you should avail yourself of any mild days that may occur, and have them dug up a full spade in depth, leave them in the rough, and broadcast lime over them. By so doing you will not only cause their tenacity to be broken down by the freezing and thawing of winter, but in spring you will be the gainer of so much time, a matter of great moment at that season of the year, when much has to be done in a very limited period of time.

Hot Beds.—Every farmer's garden should be provided with one or more hot beds, as without these conveniences, it is impossible to be furnished with very early vegetables, a source of comfort which no farmer should be without—to say nothing about their luxury and healthfulness. If you have no such appliances about your garden, you should forthwith supply the deficiency. A hot bed of sufficient dimensions for a large family need not cost much, and, if made in the way we described last January, will cost very little, as it can be made by any common farm hand.

Time of Sowing Seeds.—In order that the plants may be ready to set out when the ground may be in a condition to receive them, we will mention that plants are generally in a condition to be transplanted in from 6 to 8 weeks from the time of sowing the seeds.

The garden vegetables which require to be early sown, are *Tomatoes, Egg-plants, Cabbages, Lettuce, Cauliflowers, Broccoli*, and can all be compressed within the compass of a hot bed 20 by 4 feet in dimensions.

GUANO FOR TOBACCO, CORN AND WHEAT.

CLIFTON, Va., Nov. 12, 1851.

Dear Sir:—As I have for several years read the "American Farmer" with interest, and sometimes with profit, it is time I should make some contribution to its columns.

I reside on the south side of James River, about half way between tide water and the mountains. A very large proportion of the land in this section of Virginia, although not absolutely worn out, is reduced below the point of producing clover, or good crops of wheat. We have no marl, and lime is too expensive, and of too doubtful utility for general use. I have applied 25 bushels to the acre without any apparent effect. It is vain to tell farmers, off the rivers, to husband their manure. Land which will not yield more than five or six bushels of wheat to the acre, and that with very short straw, furnishes little material for manure.

Something may be done by deep ploughing, where there is a red clay foundation, as is generally the case in this part of the state, but this process is too slow.

The community of farmers are now looking to Guano, as furnishing the most probable means of renovating their lands, but even this wonderful production of nature is too high, at present rates, for general use.

Having used this manure for several years, I shall proceed to give the results of my own experience.

Two years ago I purchased 3 tons, 2 of which I applied to 20 acres of a James River hill, which had been a good deal worn, though not gullied, by hand croppings, or bad cultivation, or both combined. The Guano was sowed *dry*, and on the wide rows laid off for sowing wheat, and ploughed in with two horses, the wheat then harrowed in. I forgot to say that the land had been fallowed with three horses in the month of August, and the wheat sowed in October. In consequence of the dryness of the guano, and the width of the rows, the wheat was very much striped, being very luxuriant where the guano fell in the largest quantities. The product did not exceed 200 bushels, or 10 bushels to the acre, but the quality was so superior that I saved it all for seed.

In the spring of 1850, I applied 200 lbs. to the acre, on 8 acres of land, which had been manured 3 years before for Tobacco, and the same quantity, on 3 acres which had never been manured, and was very poor. On the last I also turned in some half rotted straw, raked up in the barn yard, after all the farm yard manure had been hauled out. Between these two pieces of land, 19 acres were heavily manured. The whole 30 acres, had been well broken with 4 horses, early in the winter.

The last year was the worst I have ever known for Tobacco. Nevertheless, the first 8 acres produced a very fine crop—the last three acres brought much better tobacco than the adjoining manured land, I should say not less than 600 lbs. to the acre. My whole crop, including 25 acres of low ground Tobacco, which was nearly all frost bitten, averaged $8.50. Had the three acres of highland been estimated separately, the average would have been much higher. I measured from these 30 acres that year upwards of 600 bushels of wheat of very fine quality, both pieces of guanoed land being *above* the average of the whole lot. Adjoining the *three* acres is an equal quantity of land of the same quality, which did not yield 5 bushels to the acre.

No planter would have put such land in Tobacco without heavy manuring. I feel assured that with the straw applied alone, it would not have produced a third of the quantity, of the most inferior lugs. These results are too uncommon to form the basis of a calculation of the probable profits of guano. The last spring I applied 3 tons to Tobacco land, at the same rates, without any *very marked* effect.

The land sowed two years ago, is now *striped with clover* as it was with wheat.

I may here add, that since the first experiment, I have always moistened the guano, and sowed it broadcast in rows of 8 feet width, *without plaster*.

This fall I have applied 11 tons directly to wheat, in addition to the three above mentioned, on tobacco land, which is now in wheat. Whether I shall be remunerated for so large an outlay, is "in the womb of the future."

And now Mr. Editor, I must acknowledge, that I have not been altogether uninterested in this communication. I want information which will shed more light on my path, than I can throw on that of others, by any thing I have written.

If guano be sowed broadcast on corn land, and ploughed in before planting, will the corn consume it, or leave enough to be available for the wheat crops to come after it?

Suppose one-half—say 100 lbs. per acre—be applied broadcast to corn, next spring, and 100 lbs. on the same land, next fall at the time of sowing

wheat, what would be the effect on both crops? If you, or any of your correspondents can answer these questions, you will greatly oblige

Yours Respectfully, P. H.

Note by the Editor of the American Farmer.

We believe that neither 100 nor 200 lbs. of guano, applied to *very poor land*, will be sufficient to produce a *large* crop of corn. *Corn* is a very gross feeder; and to ensure a prolific yield must be well fed. As the land of our esteemed correspondent "P. H." is a tenacious clay, he may rely upon it, that its mechanical, if not chemical properties, will prevent loss by evaporation of the ammonia of the guano already formed, as well as that which may hereafter be formed. Hence then it may be hopefully believed, that if he apply a liberal dose of guano to his corn crop, he may confidently calculate that there will be enough left, after the necessities of the corn crop may be supplied, to grow him a good crop of wheat, and enable him to seed his wheat to clover, with every prospect of the latter taking well, and bearing him luxuriant crops, provided there be lime in his soil, (and from the result of his experiments with lime, we judge such to be the fact,) if the season should not prove a dry one.

Were we to plant *corn*, in land so poor, that, when unaided by manure, would only produce five bushels of wheat, we certainly would not rely upon less than 400 lbs. of guano ensuring a good crop.

Our correspondent appears to desire that his land should be brought to a state of fertility by the *quickest* practicable process, and from the beautiful results of his experiments with *guano*, we know of no agent to which he could look with so much certainty of success as to that very manure. The next best one, would be a full dose of bone-earth—say 10 bushels per acre—dissolved in one third its weight of *sulphuric acid*, diluted with two or three parts its weight of water, to be mixed with a quantity of ashes equal to that of the bones, after the latter had been dissolved.

If our correspondent is prepared to be content with a moderate crop of corn, he may give to the corn 200 lbs. of the guano, and a like quantity to the wheat crop that may succeed it. If he should pursue this latter course, the presumption is, that the wheat crop would be the better of it, as also the clover, which may, and should follow it; but it is a matter of doubt with us, whether what he would *lose* in the corn crop, would not be greater, than he would *gain* in in the wheat crop. If we were to divide the guano between the two crops, we should give 300 to the corn and 100 to the wheat.

As to the "*striped*" appearance of his wheat and clover, *that*, we presume, was the result of the *unskilful* sowing of the guano. By moistening, and pulverizing the lumps with the back of the spade, he would not only make it in a better condition to be sown, render the operation more congenial to his hands, but prevent, for the time being, all loss of the ammonia, as it would be absorbed by the water.

We cannot conceive the existence of any necessity for making his ridges so narrow as 8 feet. Certain we are, if he ploughs his hill-sides horizontally, —as he ought—he may, with decided advantage, triplicate, or quadruplicate the width of his ridges. By such *narrow* ridging, there is not only a loss of soil, but of manure also.

The successful results of the experiments of "P. H." with guano, are worth many theories, and should encourage him to continue its use.

Before any one can say what substances his land wants, with any degree of certainty, it will be necessary to have an accurate and minute *analysis* made of the soil, by a competent, pains-taking *chemist*.

We think it likely, from the description given by "P. H." of the *subsoil* of his land, that *deep ploughing* would bring to the surface most of the *inorganic* substances which enter into the cultivated crops, as well as some of those *organic* ones that plants most delight in; but this can only be determined, as in the case of the surface soil—by an accurately conducted analysis.

CULTURE OF THE TURNIP.

To the Editor of the American Farmer—

SIR:—The President and some of the members of the Agricultural Society, during the evenings of the week of the late annual Show, (at the Society's rooms) entertained the members with giving their experience and application of Guano as a manure.

I send you two specimens of turnips raised with the said manure—they are the largest of the crop. The large one is the true hybrid or yellow Aberdeen; the other, Ruta Baga, or Swedish. The seed were sown the second week of August, on a piece of land that has been in cultivation for fifty years or more, under the old system of Maryland rotation of crops, that is, corn, oats and buckwheat, as long as they would grow; then briars, sassafras, &c. for a furlough.

Last February I ploughed it as deep as three horses could turn it over, (briars, sassafras and all,) planted it with mercer potatoes, giving 200 lbs. of Guano to the acre, applying it in the row after planting the potatoes. The crop looked very well until the dry spell came on in June, when they dried up entirely.

The first week in August we ploughed and subsoiled the ground as deep as 2 oxen could draw, laid on 100 lbs. Guano and 2 bushels Plaster to the acre: then sowed the ground with Lucerne, with a slight sprinkling of mixed turnip seed, to shade the crop—the ones sent you are the produce. I wish you to notice the size of each—they have both had an equal chance.* Had it been a favorable season, I think we should have doubled our crop.

The Hybrid I consider has advantages over Ruta Baga as a crop for stock. It can be sown two months later; will come to maturity on poorer land; it is more hardy, as it will grow until the very latest period of vegetation in the season, and will produce double the crop. As for the fattening qualities I can say nothing. We shall endeavor to keep the seed of this variety genuine, and for sale at the store, corner of Charles and Saratoga streets.

Lucerne sown in August, with a slight sprinkling of turnip seed, to shade the plants, is much better than when sown in the spring; it has no summer weeds to contend with, and will be strong enough to withstand the winter frost.

Yours, &c. SAM'L FEAST.

Cockeysville, Balt. Co. Dec. 1, 1851.

[* The difference between the two, is, relatively speaking, about corresponding to that between Tom Thumb and the Kentucky giant.—*Ed.*]

☞ Several communications in type for some time, are still crowded out.

MR. McHENRY'S CORRECTIONS.

We take great pleasure in giving insertion to the following letter from Ramsay McHenry, Esq. explanatory of the remarks made by him in the *discussions* of the *Maryland State Agricultural Society*, at their meetings in October last. And while we regret that he should have been mis-reported, we must be permitted to relieve ourself of all blame in the matter, as we were *not* present in the room where the discussions took place, being officially engaged in another one, and had to rely upon the report of a friend, who kindly undertook to act for us. We take occasion to say for that friend, that, his failure to embody the remarks of Mr. McHenry correctly, must have arisen from the confusion incident to the noise on the street, which, upon the occasion of so great a public festival as was that of the late Fair, was of the most Bedlamitish order, as every vehicle of pleasure, or conveyance, was moving rapidly through the great thoroughfare of our city, on which the Society's rooms were situate. Indeed, it is very wonderful, that, in such a state of confusion, he was able to make any report whatsoever.

It is grateful to our feelings to see Mr. McHenry vindicate himself upon the question of *benefactorship;* for we must confess, the *report* in question, placed him in a position rather queer: so much so, indeed, that, had we felt ourself authorised in so doing, we would have omitted that part of the report, as we had our doubts as to the possibility of a gentleman of Mr. McHenry's education and excellent sense, either having entertained, or expressed, such an opinion of the claims to the character of a *benefactor*, of a merchant, who, while enjoying the *monopoly* of an article, had made the most of his position.

So far as regards the pretensions of our late fellow citizen, Mr. *George Law*, the case is very different; for that excellent man labored with a zeal that was almost boundless and untiring, to introduce the use of guano, from a conscious belief in its virtues as a manure, untinctured by a solitary sinister motive, being impelled onward in his noble exertions, by the single desire to benefit the agricultural community—a class to which he was bound by every tie of disinterested affection, and sincere regard. We are, therefore, gratified, that an occasion has presented itself, for Mr. McHenry to do justice to the momory of a departed gentleman, who, while living, with unflinching toil, and untiring energy, left no exertion unessayed to promote the interests of the husbandmen of our land—and who, if high and generous purposes, liberally and intelligently exerted in a noble cause, are calculated to confer the claim, is entitled to the character of *benefactor;* for his labors were ennobled by their disinterestedness, and sanctified by their purity.

HARFORD CO., Nov. 26, 1851.

To the Editor of the American Farmer—

MR. EDITOR:—In the American Farmer of this month, you give sketches of the conversations held in the rooms of the Md. State Ag. Society, on the 21st and 22nd October last. I am by no means surprised that these sketches should be imperfect, and occasionally erroneous, in consequence of the noise from the adjacent street, the desultory nature of the conversations, and the various interruptions to which the reporter was subjected—to say nothing of the unavoidable hurry in which the compression of the reports, preparatory to publication in your valuable columns, must have been made.

Actuated, then,—as the above remarks prove—by no spirit of fault-finding, I beg leave to ask space in your paper, to set myself right, upon several points, in regard to which your sketches render me liable to misconstruction—and even, in one instance, to ridicule.

I am made to say that I was induced to use guano "by Mr. *George*, who had proved himself a benefactor, and had blessed the husbandmen of Maryland in this respect." The substance of the remarks actually made by me, as intended to be given in the above quotation, was—that I had been first induced to experiment on the use of guano, by the *late Mr. George Law*, who, by his disinterested, wide-spread, and successful exertions to introduce this and other fertilizers, and improved modes of farming, &c., had been a great benefactor to husbandmen, and an efficient promoter of the prosperity of our State. It would have been rather absurd in me to have eulogized Mr. *George's* efforts to promote the consumption of an article, for the sale of which in Maryland, he is the sole agent of the English firm, holding a monopoly from the Peruvian Goverment. Mr. *George's* profits, in the shape of commissions, are of course in proportion to the quantity of guano disposed of by him, and while I wish to allege nothing against his mode of conducting this agency, I most respectfully decline appearing before the public as bestowing lofty encomium upon any gentleman, for activity in promoting his own interest.

I am reported as saying, *generally*, that "I preferred 300 lbs." as the quantity of guano to be applied per acre. I did say, that, for *wheat*, on *very much* impoverished soil, I had found about 300 lbs. the most profitable in its results—and on similar soil, about 400 lbs. for corn, and 150 to 200 for oats.

In reply to a question whether I had used guano on land which had been limed, I answered—as stated in the sketch—affirmatively, but added (which is a most important qualification,) that, in such cases, I avoided bringing the guano into contact with the *quick*, or partially slaked lime. I did *not* say that I *always* applied the guano "without mixture," but that I did so when it was to be *immediately turned under by the plough*—and that, when applied as a top-dressing, I mixed with it, before sowing, plaster of Paris. Instead of speaking of lime as "destroying acids," I either did, or meant to say, that it, in a measure, *neutralized* the *excess* of certain acids, which the frequent application of guano and other manures, would cause to exist in the soil.

Very respectf'y yours, RAMSAY McHENRY.

FRUIT TREES—DISEASES, AND INSECTS.

(Continued.)

The apple tree borer is a very troublesome insect in some sections of the country. In Western New York we have never met with it but in two or three instances, in very old, neglected orchards, that had stood for twenty years in grass. The beetle is striped brown and white, and is about three-fourths of an inch long. It deposits its eggs in June, in the bark of the trees near the ground. Here the larva is hatched, becoming a whitish grub, which saws its way into the tree, perforating it in all directions, sometimes completely girdling it. The most effectual method to destroy them is, to insert the end of a wire into their burrow, and killing them. The same means are taken to guard against them as

against the peach tree grub, viz:—placing a mound of ashes around the base of the trunk in the spring, and allowing it to remain until the season in which beetles deposite their eggs. It prevents them from reaching the bark at the surface of the ground, the place usually selected. It is stated in Downing's Fruit and Fruit Trees, that the beetles may be destroyed in June by building small fires of shavings in different parts of the orchard.

The apple worm.—The apple moth deposits its eggs in the eye or calyx of the young fruit; the grub is there hatched, and eats its way into the fruit, leaving behind a brownish powder. Sometimes the apples drop before they are half grown, and occasionally remain until they acquire a premature ripeness. Early apples are more affected, generally, than late ones, probably because in a more forward state when the eggs are deposited.

When the fruit falls the grub immediately leaves, prepares itself a place in some crevice of the bark of the tree, and spins a thin paper-like cocoon, in which it spends the winter, to come out the following spring and produce itself. There are but two ways of destroying them; one is at pruning time in March, to search carefully for the cocoons and destroy them, and the other is to pick up promptly all fallen wormy fruits, and destroy them. These two means, industriously followed, will greatly diminish the amount of wormy fruit, the increase of which is exciting alarm.—*Barry's Fruit Garden.*

CULTURE OF THE PEA.

To the Editor of the American Farmer.

There is not, perhaps, any section of Virginia better adapted to the Pea than this; the climate and soil and tastes of the people, all combine to invite its cultivation and increase its production.—The pea, too, is destined to supersede every other fallow on poor land, and a few remarks on the different varieties may not be amiss; indeed, if every farmer, in plain style, would write something, leaving to your better judgment to select, your already valuable paper would increase in variety and usefulness. This year I planted several kinds of peas, which I will enumerate, with the observations I was enabled to make, though, of course, I shall not expect these observations, extending only thro' one season, to settle the character of the different kinds.

The Shinney Pea, for *all* purposes, begins to be placed, I think, at the head of the list; it comes early, bears long and late, has a fine vine, and is a most excellent pea for table use; its color is variegated, and each pea, when dry, rattles in its envelope. This last is the only thing to distinguish it from another early pea, which has not so good a vine, and which is known here as "The poor man's relief."

"The Cow or Yeatman Pea," is of a light yellow color; has a very large running vine, but bears late and is long in getting its growth; it has not this year been a large bearer, and though admirably adapted for fallow purposes when sowed early, cannot be used after corn, except upon very light, rich soil.

The "Black Stalk Pea," as its name imports, is a large black pea; comes to maturity and bears earlier and I think longer than the cow pea; it is, perhaps, the best pea we have for our use; we sow our corn land, as you are aware, during the last working, and there is but little time for the pea to reach maturity. This is a coarse pea, has a very thick skin, and not very good for eating.

The "Jefferson Pea" is white, larger than the black-eye, has a wrinkled surface when mature, a fine vine, and comes early; it is too tender, however, to keep, though most delicious for table use, and I would advise everybody to seed a "patch" for that purpose.

The "White, or Haile," is a delightful Pea for table use; it is rather larger than the Jefferson; has a smooth surface and a tolerable vine; it is said to be a large bearer, though I have not found it so. Many farmers think highly of this pea, and it will be tried for fallow.

The "Poor Man's Relief," is a mottled Pea, comes early, is soon gone, has a small vine, and fit for nothing but early table use; it takes its name from this circumstance.

The "Black-eye" is too well known to require comment; under very favorable circumstances, it bears tolerably, but furnishes, I think, a poor fallow.

The "Mexican Pea" is very small, of a green color, with a white eye; it is a good bearer, and has, perhaps, the largest vine of any other variety, but like the cow pea, it is very late reaching maturity; its superior vine will no doubt soon bring it into general use for fallow purposes, though it can hardly be used to fallow corn on poor land with much advantage. I have never seen it on the table, but will take your word that it makes excellent soup. One gallon to the acre is said to be an average for a good fallow, but great care is necessary in putting in. The pea is smaller, and the sprout is smaller and more delicate than any other, and of course more liable to be killed.

You will see by the above that I do not acknowledge the truth of your remark, "that a pea is a pea," in the spirit in which you intended it. I think we can discriminate with great advantage, and I am in hopes this article will call out many more upon the same subject, from more observant and better informed persons than myself.

My farm is situated upon the heights of "Pea Ridge;" the surface is rolling; the soil light, with a stiff clay substratum. This may be taken as a general description of our country. We enjoy a salubrious climate, have a plenty of marl, and an outlet for everything we can make. The York and its tributaries, and the Rappahannock, flow on either side, and steam navigation on the latter, and sail vessels on the former, keep up a constant communication with most of the principal Atlantic cities.

York river is behind the age, and a stillness now reigns on its surface and along its shores, greater even than when our fathers first viewed this "delightsome" land. The subject of steam navigation on this river and its tributaries, I am glad to see, is beginning to excite some interest. Meetings have been held and resolutions passed, but little money subscribed. Cooper describes a ship in a storm driving on a lee shore, and an American aboard proposing to call a meeting and pass resolutions upon the emergency. We are much in the same way, and I fear all enterprise must be imported. Will not some company in your city send us a boat? We should visit you oftener, send you something to buy, and buy something from you in return, and the prosperity of your city would of course be increased by every foot of country you

could add to the area of your markets or from which you draw supplies.

I must conclude this already too long article, by saying, the city of Baltimore is largely indebted to you; you have drawn the attention of the farming public to her, and given her a larger space in their thoughts. and thereby increased her trade. May you go on in the path you have chosen, though I much fear the many compliments and commendations you receive, will turn your head; and so soon as you value your labors as highly as your readers appreciate them, the American Farmer will begin to decline. BRUINGTON.

EXPERIMENTS WITH GUANO—CAN LAND ORIGINALLY POOR BE IMPROVED?

"I expect to be able (during the next summer) to give you some information in regard to plaster and guano combined, and guano alone, as a manure for wheat. I made an experiment last spring on oats, (using 25 lbs. plaster to 100 of guano,) but saw no difference in the crop. This, however, I think pretty good evidence against the position of T. S. P., and according to yours I shall look for a difference in the clover next spring. While writing, I will ask one question, to me and many others very important. Can land originally poor, be profitably improved, and to what extent?

Respectfully Yours, ALBERT QUISENBERRY.

Twyman's Store, Va. Nov. 20, 1851."

Reply by the Editor of the American Farmer.

1. Without an analysis of any soil "*originally poor*," it is impossible for us to say whether it can, or cannot be "profitably improved." Any soils, to be productive, must possess within their bodies certain portions of the following substances, to keep up a just equilibrium, and dispense to growing plants their appropriate food, viz:—*Silica and fine sand, alumina, oxide of iron* and *magnesia, lime, magnesia, potash, soda, phosphoric acid, sulphuric acid, chlorine, carbonic acid, humic acid, humus, and organic substances, containing nitrogen.* Without an *analysis*, as we have before premised, it is impossible to say of which of the above substances such soil may be deficient, and hence, the difficulties which surround it, preclude a definite and intelligent answer to the question which our correspondent has propounded.

An *analysis* of a soil considered as being "originally poor," might disclose the fact, that the *deficient* substances were few in number, and not of a costly nature; in which case it might be "profitable" to improve it. Indeed, such analysis might demonstrate, that such soil needed only one or two elements to make it productive, and they easy of procurement, and cheap of price:—a few bushels of *bones* or *ashes*; or a few hundred pounds of *guano*, or some other substances, might be all that was needed to infuse vitality into the soil, and render it fruitful. In the absence, however, of this information, which can only be obtained in the way indicated, it is impracticable to arrive at just conclusions. We are among those who have such faith in the providence of God, as to believe, that he never made any thing but could be converted into some useful purpose for the benefit of his creatures, and that even land "originally poor," can be profitably improved, if man will exert his reasoning powers to that effect:—but we also believe, that he must go the right way about it.

EXPERIMENTS IN THE USE OF GUANO.

We take especial pleasure in publishing the following *interesting experiments* in the use of *Guano with, and without, plaster*, by Mr. *Thomas E. Blount*, of Burleigh, Sussex County, Va. They have been evidently made with accuracy, and with the single desire of arriving at proper results. With these results we are perfectly satisfied—nay delighted,—for, so far as they have proceeded, they go to vindicate the great principle for which we have been contending for years.

BURLEIGH, Sussex Co., Va., Nov. 13, 1851.

To the Editor of the American Farmer—

DEAR SIR:—The following question—Whether the combination of Guano and Plaster improved the former as a fertilizer of the soil, or whether the "fixed salt," *Sulphate of Ammonia*, produced by the combination, is an "insoluble one"—has been fully discus-ed and a good deal of practical matter brought to bear on the subject; yet the agricultural mind appears undecided—which indecision might be removed if the facts in existence were brought to light, and the question at issue thereby speedily determined. Correct reports are sadly wanting—how to obtain them is a question as difficult to solve as that under consideration. Farmers—practical agriculturists—are extremely diffident, and claim to have a great aversion to seeing their names in public print; too large a number are ready to write over anonymous signatures, but these are not wanting. Such contributions leave not that deep impression on the mind that correct reports should make, and if the contributions contain nothing but "the truth—the whole truth," why should they be ashamed to affix thereto their true signatures. Hundreds of farmers in Virginia and Maryland, made liberal use of Guano on their wheat crops in the fall of 1850, and on their spring and summer crops the present year, and doubtless, in numerous instances, it was employed in combination with Plaster. These crops have all been gathered, housed, or sold—the action of the Guano, used alone, compared with the action of Guano combined with Plaster, and yet the important question at issue remains undetermined for the want of correct practical reports. Shall the urgent appeals so often reiterated be in vain? There are facts in existence, I am convinced, that would determine this question. Brethren of the plow, let us have them—withhold them no longer. I venture to affirm that the pages of the American Farmer are open for your reports; this is truly an important subject; thousands of dollars are annually laid out for this very active manure—Guano—and large quantities of Plaster are purchased to combine with it. Undoubtedly then, it is the part of wisdom to learn the most judicious mode of application. This information can alone be obtained through faithful reports from those who employ it liberally. Therefore, for your own sakes, *et pro bono publico*, you should speedily cast in your mites.

With deep interest I have read the many contributions on the question at issue, published in your journal of agriculture, *pro et contra*, and as I informed you in my letter dated July 6th, had instituted experiments on the Cotton crop, also on a small lot of pumpkins and water melons; the two latter was a perfect failure, owing to the severe drought experienced during the summer months. These experiments were made to satisfy my own mind on this important question in agriculture.

Yet, I am not fully assured of the most judicious mode of applying Guano—but I *have "a very particular leaning" to the combination of Guano and Plaster in equal quantities.* The experiments made on the cotton crop were (as remarked in my letter of July) on two distinct species of soil, which I shall designate in this report Lot No. 1, *clay mould*, Lot No. 2, light sandy soil (excellent cotton land, but too poor at present.) Neither soil was analyzed, consequently their component parts are unknown to me. Both lots were broken up early in April (average depth of furrow eight inches) and well harrowed—allowed to remain in this state, in order to settle until the 8th of May, when the drills were laid off about seven inches in depth, for the reception of the manure. Twenty rows were selected through the centre of each lot for the experiments.

Lot No. 1—*Clay Mould*—5 rows, stable manure, Ashes and Plaster.
" " 5 rows, 25 lbs. Guano.
" " 5 rows, 25 lbs. Guano and 25 of Plaster.
" " 5 rows, 25 lbs. Guano and 5 of Plaster.

The portion of this lot selected for this experiment was identically alike as regards quality and texture of soil, so far as the eye can determine without an analysis—and in order to be as accurate as possible, the *Guano and Plaster was weighed separately for each row*; and as fast as drilled covered with the single turn-plow, forming the cotton ridges, the cultivation the same throughout the lot; an accurate account was kept of the number of pounds of cotton picked from each of the five rows, which I now copy from my "farm recorder."

			Sept. 15 lbs.	Sept. 30 lbs.	Oct. 14 lbs.	Oct. 29 lbs.	Total of pounds.
5 rows	28 perches	Stable Manure, Ashes and Plaster,	31	72	44	20	167
5 rows	28 do	Guano, 25 lbs.	34	79	35	12	160
5 rows	28 do	Guano, 25 lbs.—Plaster, 25 lbs.	33	65	40	20	158
5 rows	28 do	Guano, 25 lbs.—Plaster, 5 lbs.	34	64	36	18	152

On lot No. 2—*Sandy Soil*—I cannot give a *correct report*, as I was absent from home when the first picking was made, but will remark, that if there was any difference in the twenty rows selected, it was not discernable throughout the season in the growth or opening of the crop. The quantity of Guano and Plaster applied was the same to the row as that used on lot No. 1.

What inferences shall we draw from the experiments detailed above? *First*, it is conclusively shown that the salt produced—"Sulphate of Ammonia"—by the combination of Guano and Plaster, is *not* an "insoluble salt," for its action is nearly equal to that of Guano alone—and if Plaster is acknowledged to be a "fixer" of ammonia, or to exert a "conservative influence on Guano," then it must be acknowledged that when the combination takes place, a *more lasting*, if not a more (present) powerful manure is thereby produced—but enough of this. Let the experiment speak for itself, and your readers draw their own inferences, for "little boats should keep in shallow waters."

It has been asserted by the "knowing ones" with peculiar confidence, in the different agricultural journals, "that if Guano and any species of seed were placed in contact, that the vitality of said seed would be certainly destroyed." This is untrue, in every instance; for I have wheat now growing, seeded early in October, that was soaked some four hours in strong brine, taken out and rolled immediately in Peruvian Guano—seeded and ploughed in immediately. I have seeded seven acres in this way; putting one bushel of wheat to the acre, rolled respectively in 200, 180, 150, 125 pounds of Guano to the bushel. P. H. Goodloe, Esq. of Albemarle, Va. states in the Oct. number of the Southern Planter, that in the fall of 1850, he used Guano in this way on a part of his wheat crop—the wheat was made perfectly wet, and mixed with Guano, at the rate of a bushel and a half of wheat to two hundred pounds of Guano, and this quantity applied to one acre. We only mixed as fast as the seedsman used it, as we were apprehensive the wheat would be injured if allowed to remain but a short time in a *bulk* of *damp* Guano. The wheat treated thus, grew beside wheat on land where the Guano was ploughed in and unmixed with the seed—he says, "there was no very perceptible difference—all came up equally well, and grew off most luxuriantly." The editor of the Planter, F. G. Ruffin, Esq., remarks—"Having seen Mr. Goodloe's crop at several stages of its growth, we can testify that there was no difference in the appearance of the different parcels." This is strong evidence against Guano destroying the vitality of seed—and upon the strength of it we tried the experiment with one acre of wheat, which came up in a few days so beautifully, that six more acres were seeded down in the same way. As yet we have no cause of complaint. There are many advantages in applying Guano in this way—it is more regularly distributed on the land—is not carried off by every breeze, and my word for it, the seedsman will make you a "low bow" at the end of the day's labor, as it saves him many a "weary step," as both wheat and Guano is sown at one operation. Truly yours,

THOS. E. BLOUNT.

THE AMERICAN AGRICULTURIST, which for so many years was published in the city of New York, and edited with great ability by Mr. Allen, has been *discontinued*. It has been succeeded by a journal called the *Plow*, which is edited by Mr. *Solon Robinson*, a gentleman well known to agriculturists. Mr. Robinson is to be assisted in his labors by a number of agricultural writers of celebrity, and will, doubtless, make an interesting paper. We cordially welcome him him into the brotherhood, and wish him all possible good luck.

Manor Agricultural Society.—At the Annual meeting of the Manor Agricultural Society, held at "Mount Moriah," on Saturday last, the 6th of December, the following gentlemen were elected officers for the ensuing year:—*Hagerstown (Md.) News.*

Andrew French, President; John Shafter, Isaac Motter, Vice Presidents; Jacob Fiery, Treasurer; John Reichard, Recording Secretary; Dr. Thos. Maddox, Corresponding Secretary.

The Society by resolution, have taken in hand the subject of a County Society.

IMPROVEMENT IN ANNE ARUNDEL, MD.

To the Editor of the American Farmer.

I have been a silent observer of men and things for some time, but deeply interested in all things which appertain to the interest of the Farmer;—and it may be gratifying to you and your readers to know what improvements (if any) are going on in this region. But before we give you a bird's eye view of affairs, let me acknowledge our indebtedness to the circulation of the Farmer. We are entirely satisfied with it, and it is wielding an immense power on the agricultural community. Obstinacy and prejudice are giving way to the light of reason and experience. But there are still some who are opposed to *book farming*, but I assure you their foundations are giving away gradually, and the reading of the American Farmer adds thereto not a little.

Every person acquainted with this part of the country knows of its poverty, for it was a proverb, and a reproach. The passer-by is now astonished at the quick and recent improvements, which I trust is but a trifle of what it will be. Now for facts to establish the foregoing remarks:

It is about three years since the Rev. H. Aisquith commenced the use of Guano. His farm then was worth say $15 per acre. I understand that recently he refused an offer of $30 per acre. Its improvement is owing entirely to the use of Guano. Indeed this is a great manure—"it is life to the dead." Other farms which might be mentioned, have increased in the same ratio, where this manure has been used, and indeed it has had a beneficial influence on all property.

Being somewhat of a farmer, you will allow me to refer (as the yankee says) "to home." It may be proper to say that from experience, and not from a chemical analysis, that Guano is nicely adapted to our soil. We used last year three tons of Guano on land that did not yield more than one barrel of corn to the acre, if that, and this summer we took from it 400 bushels of wheat, which claimed the highest price in market—We put 200 wt. to the acre. The average crop of wheat on this farm was about 200 bushels, and this last year it amounted to 600 bushels, and where the Guano was sowed there is a fine prospect of clover next year.

Some of your writers think it will not pay so well on corn (Guano.) We submit the following experiment made with accuracy:—We put ½ a ton of Guano on 5 acres of corn land, being a part of a cut of 9 acres—all of the same quality of land, at the rate of 200 wt. to the acre. We then selected 47 rows of each kind, and found that the 47 rows of guanoed corn turned out 17 barrels, and the other only 7 barrels, and there is as much difference in the quality as in the quantity. The number of barrels raised off all the guanoed ground was 23 barrels, making 4 3-5 barrels to the acre, and the other did not amount to more than 2 barrels. We have therefore come to the conclusion that it will pay on any crop in this section, and that there is no successful farming without it.

We use this *wonderful article* without plaster, but mix it with salt or brine, and whether even this is of any benefit we cannot tell. One thing we do know, that using it in this manner, it has never failed to remunerate us, and I must say, that our neighbour, who uses plaster, says that guano does not act on his land like unto ours. Whether it is owing to the want of adaptation to the soil, or to the effect of the plaster, "deponeth saith not."*

Within a compass of some 10 miles we have some clever and enlightened farmers and others who have caught the fever of improvement, but like the German who wished to show his liberality in as small a compass as possible, cried out "who cares for expense, give me for two cents cider."

The farmers here have every inducement to husband their little means, and apply it to their soil with certain success. They have all advantages of market, to get the best prices and speedy returns for their labor, and to be raised to an honorable position in Agricultural science. AGRICOLA.

MILLERSVILLE, A. A. Co. Dec. 11, 1851.

**Note by the Editor of the American Farmer.*

The use of *Salt* or *Brine* with *Guano* will produce a similar effect to mixing it with plaster, viz; the formation of an involatile salt. By incorporating Guano and Salt together, the *muriatic acid* of the salt unites with the *ammonia* of the guano and forms muriate of ammonia—whereas, in the case of plaster, sulphuric acid, one of its constituent parts, unites with the ammonia, and forms a *sulphate of ammonia*. In either case, a salt not subject to loss from evaporation is formed. This union in the case of salt as the mixing substance, would take place soonest, because it takes less moisture or water to decompose the compound, and liberate the muriatic acid. Two or three parts of water to one of salt is all that is necessary to produce this effect, while in plaster, it takes from 400 to 500 parts, so that the application of *salt* or *plaster*, resolves itself into a question of time, economy, and durability.

SOOT AS A MANURE.—Professor *Dana*, who is one of the best chemists in the country—and who, by the by, has published one of the most scientific works on Agricultural chemistry which has ever yet issued from the press, thus speaks of soot as a manure:

"Among the most powerful manures in the class composed of geine and salts, is *soot*. There is no one substance so rich in both. Its composition allies it to animal solids, and is as follows:

Geine	30.70
Nitrogen	20.
Salts of lime, mostly chalk	25.31
Bone dust	1.50
Salts of Potash and Soda and Ammonia	6.14
Carbon	8.85
Water	12.50
	100.

On the principles adopted for determining the value of manure, the salts in 100 lbs. of soot, are equal to 1 ton of cow dung. Its nitrogen gives it a value, compared with cow dung, as 40 to 1."

Soot acts with the greatest power in seasons marked by seasonable rains; from the dryness of its nature, in periods of drought, it is not so efficient, owing to the want of moisture to dissolve its enriching substances. Looking at its constituent elements, and seeing the large quantity of ammonia which it contains, we believe it should always be mixed with mould and plaster, or salt, and ploughed in. Thus treated, 20 bushels would be a good dressing for an acre.—*Editor American Farmer.*

☞The news of a revolution in France, will probably have a favorable effect on the grain market.

For the American Farmer.

A PLEA FOR THE FARMERS OF MARYLAND.

In some of the nations of Europe, the large fortunes of the nobility and gentry consist mainly, in real property; a large class spend their incomes in idleness and luxury, but there is a better order, who devote their time and their means to objects of utility.

The projects of Brindley, in canalling, could never have been perfected, but by the fostering aid of the Duke of Bridgewater. Mr. Coke, of Norfolk, when he came into possession of his estate, found a large part of it a barren waste, the surface a dry sand; but, upon examination, he discovered the substratum to be a strong tenacious clay; each of these elements, separate, are unprofitable for agriculture, but in combination, become productive. Mr. Coke, by the simple process of deep ploughing, changed an unprofitable common into a productive farm. Deep ploughing ought to be resorted to with caution. If the surface and substratum be sand, or clay, I think deep ploughing injurious.

Smut in the wheat crop was but little known in Europe, or America, sixty years ago. The deleterious effects, after its first appearance, spread rapidly and occasioned much loss and alarm. M. De Bombassle, a member of the French Institute, after a course of long and painful experiments, discovered a corrective. By a change of seed wheat, I introduced smut into my crop; by a careful application of this remedy, I have entirely destroyed the injury. A full account of M. De Bombassle's experiments, and his final success, may be found in the 3d vol. of the Farmer's Register, page 743; and I entertain a hope, that by persevering experiments, a corrective may be found for the potato rot.

The powers of steam have been long known; its application to navigation has been essayed for a century,—the difficulties were at last surmounted by our Fulton, who was aided in his experiments by the confiding liberality of Chancellor Livingston. Perhaps the benefits of steam will be still further extended.

In England, they have a Board of Agriculture; in France, a Bureau, under the direction of their governments. The constitution of the United States, neither by provision, or implication, authorise such establishments. The late Reports from the Patent Office, I consider a furtive attempt to enlarge the sphere of the general government. Mr. Ruffin, in his agricultural address, last fall, at Easton, denounces these reports as utterly worthless, got up, at a large expense, and well calculated to extend the corrupting influence of the general government.

The affairs of agriculture, I think, belong exclusively to the State governments; as a citizen of Maryland, I protest against the intrusive hand of the general government.

Mr. Ruffin suggests that there are many problems in agriculture still to be solved, and proposes, that the heavy sum now disbursed for Patent Office Reports, should be more profitably applied to the establishment of experimental farms. I doubt much if such establishments, in Maryland, would result in any solid benefit. From the difference of soil, and influence of situation, a course of husbandry in one situation would not be adapted to another. The fine white wheat, which produces family flour at the Baltimore mills, in our salt water regions often escapes the rust, when it is deeply injured in the interior; in the latter, I think, the Mediterranean and the early Virginia blue stem, which ripen early, may be both more successfully grown.

If the constitutional objection be sound, and Congress should deliberate on the application of the money (now devoted to Patent Office Reports) to experimental farms, many difficulties would be presented. Each State would claim one or more of these experimental farms. The lands would cost much; the labor, implements of husbandry, and other stock, would annually be a serious charge; competent managers could not be had, but for large salaries, and it is much to be doubted if suitable regents and visitors would give their time and money necessary for these establishments. I think these are serious objections to experimental farms, whether established by the State or general government.

The legislature of Maryland will sit this winter; if I was a member, I would propose the establishment of a Commission of Agriculture, with one delegate from each county, to meet at some convenient place. At the first meeting, each member should present, in writing, an account of his county, the character of the soil, the crops grown, the state of its agriculture, the improved implements, its advantages of market, and all other matters connected with agriculture. This Commission should be required to sit annually, and each member should make proper report of the advancement of agriculture in his county, the crops and the general tillage, and all useful information—all of which should be carefully preserved by a Secretary, to be appointed by the Commissioners. By these means, the people of the State, and of other States, might be able to form some opinion of the different parts of the State, of which some of them have little information. I once met with a gentleman of the Western Shore, who seemed surprised to learn that good crops of hay were grown on the Eastern for farm purposes.

The agriculture of Maryland has some claim on the patronage and aid of the State. The foundation of the wealth of this State is its agriculture. The farmers of Maryland now pay annually a tax of twenty-five cents in the hundred dollars, for interest on the State debt, most improvidently, and to their great injury contracted for internal improvements, from which Allegany, Washington, Frederick, Baltimore, Carroll, Howard, Anne Arundel, Montgomery, Harford and Cecil, draw immediate benefits; Calvert, Charles, St. Mary's, Prince George's, Kent, Queen Anne's, Talbot, Caroline, Dorset, Somerset and Dorchester, none.

I think much benefit would be derived from this establishment, which would disseminate useful information to the general improvement of agriculture. The members and the Secretary should receive a per diem, to cover expenses, which would not exceed eight hundred dollars per annum.

WM. CARMICHAEL.

Wye, Queen Anne's Co., Md., Nov. 15th, 1851.

SCARCITY OF FARM-HANDS—HIGH PRICE OF WAGES.—During the late harvest, the complaint was general in our own State, as well as in others, of the scarcity of harvest hands. We heard in numerous instances of *two dollars and a half* per day being asked by, and given to, cradlers. Trying as the

labor of the field is, and willing as we are to see the full measure of reward given to those who assist in securing our crops, we have not been able to disengage the thought from our mind, that the price named was exorbitantly high, very far beyond the intrinsic value of the service performed. Men working by the day, are not very apt to put out their whole strength and skill; but on the contrary are more apt to graduate their labors so as to prolong the period of their employment, so that their own, and not their employer's interest becomes the object they have in view.

In view of the experience of the past and preceding harvests, it appears to us that wheat growers, should, against another season, provide themselves with Reapers, to as great an extent, as may be justified by their pecuniary circumstances. By so doing, they will be able, to a considerable extent, to relieve themselves of dependence upon those who make a merit of speculating upon their necessities.

ESSAYS
ON
Various Subjects of Practical Farming.

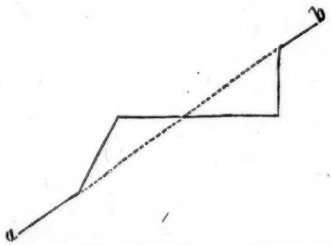
BY EDMUND RUFFIN, OF VA.

THE EXCAVATION OF MARL PITS, AND CARRYING OUT AND APPLYING OF MARL.*

(Concluded.)

Making Roads.

On high and hilly land, marl is generally found near the bottom of ravines, and separated from the field to which it is to be carried by a high and steep hill-side. The difficulty of cutting roads in such situations is much less than any inexperienced person would suppose. We cannot get rid of any of the actual elevation—but the ascent may be made as gradual as is desired, by a proper location of the road. The intended course must be laid off by the eye, and the upper side of the road marked. If it passes through woods, it will be necessary to use grubbing hoes for the digging. With these, the digging should be begun at the distance of four or five feet below the marked line, and carried horizontally onward to it. The earth so dug is to be pulled back with broad hoes, and laid over a width of three or four feet below the place from which it was taken. Thus the upper side of the road is formed by cutting down, and the lower side by filling up with the earth taken from above.



The annexed figure will prevent these directions being misunderstood. The straight line from *a* to *b* represents the original slope of the hill-side, of which the whole figure is a section. The upper end of the dotted part of the line is in the mark for laying off the upper side of the road. The upper triangle is a section of the earth dug out of the hill-side, and the lower triangle of the part filled up by its removal. The horizontal line is the level of the road formed by cutting in on the upper, and filling up on the lower side. After shaping the road roughly, the deficiencies will be seen, and may be corrected in the finishing work, by deepening some places and filling up others, so as to graduate the whole properly. A width of ten feet of firm road will be sufficient for carting marl up a short hill.

If the land through which the road is to be cut is not very steep, and is free from trees and roots, the operation may be made much cheaper by using the plough. The first furrow should be run along the line of the lower side of the intended road, and turned down hill; the plough then returns empty, to carry a second furrow by the first. In this manner it proceeds, cutting deeply, and throwing the slices far, (both of which are easily done on a hill-side,) until rather more than the required width for the road is ploughed. The ploughman then begins again over his first furrow, and ploughs the whole over as at first, and this course is repeated perhaps once or twice more, until enough earth is cut from the upper and put on the lower side of the road. After the first ploughing, broad hoes should aid and complete the work, by pulling down the earth from the higher to the lower side, and particularly in those places where the hill-side is steepest. After the proper shape is given, carts, at first empty and then with light loads, should be driven over every part of the surface of the road, until it is firm. If a heavy rain should fall before it has been thus trodden, the road would be rendered useless for a considerable time.

Implements, and means for facilitating the labors. Application of marl.

These directions are mostly suited for greater difficulties than usually occur, though they are such as attended most of my labors in marling. In the great majority of cases, there will be less labor, and care, and skill, required, because there will not be encountered such obstacles as high and steep hills to ascend, thick over-lying earth to remove, or wet pits and roads to keep drained.

In large operations and in dry and compact marl, much labor of digging may be saved by slightly undermining the face of a perpendicular body of marl, and then splitting off large masses, by driving in a line of large wooden wedges on the upper surface.

For very hard marl, narrow and heavy pickaxes are the best digging implements. For softer marl, though still of close and compact texture, heavy and narrow grubbing hoes are better. They should weigh near or quite 7 lbs. when new, and have the cutting edge 3 to 3½ inches. Gravel shovels, (with rounded points, and long handles,) of the best quality, are the cheapest and most effective tools for throwing out the marl, and loading the carts, as well as for afterwards spreading the heaps in the field.

Tumbrel or tilting carts, drawn by one horse or mule, are the most convenient for conveying marl very short distances; and even for longer distances, if on hilly roads and fields. Every part of such carts should be as light as will serve for strength, and the body should be so small as to hold only the

load it is designed to carry. This enables the drivers to measure every load; which advantage, on trial, will be found very important. If carts of common and much larger sizes are used, the careless laborers will generally load too lightly; and yet will sometimes injure the horse by too heavy loading. The small-sized cart-bodies prevent both these faults. Their loads cannot be made much too heavy; and if too light, the deficiency is detected at a glance. When there is much or steep ascent in the carriage way, 5 heaped bushels of ordinary wet marl, or 6 of dry, will make a full load for a good mule, or ordinary horse. The larger quantity may be put in by heaping somewhat above the level of the cart. The greatest objection to these carts is that they are too small to carry loads of any thing but marl. On roads nearly level, tumbrels drawn by two mules are much preferable. There is the saving of another driver, and the cost and weight of another cart; and though the cart is large and heavy, it is so much lighter than two small carts, that two mules together in the former, will draw full as much weight as if separate and with the latter. The larger carts should hold about 15 heaped bushels of marl, when the load is level with the top of the body; and which may be increased to 18 or 19 bushels, (the proper load for two mules, on level land and firm roads,) by heaping. Two mules together will draw this load, or about 1900 lbs.; or one mule, in a light cart, 9 bushels, as easily as the latter will draw 5 bushels on hilly land. But on hilly land, two-mule carts cannot well be used. For when drawing up a hill, if one mule ceases to pull for ever so short a time, the whole load, and a doubled labor, is put upon the other mule; which is thus over-strained, and taught to balk, if not otherwise damaged.

Strong laborers are required for digging and shovelling marl. Boys of 12 to 14 years old may drive single-mule carts. The animals kept regularly at such hauling soon become so gentle and tractable, that very little skill or strength is required in the driver. But for a two-mule cart, an active and careful young man should drive, because his strength is required at some times, and his judgment and care always to load properly, and to make the mules draw equally.

One of the most general and injurious errors in marling, is the unequal and irregular spreading of the marl on the land. From this cause, it often happens that there is too much and too little marl applied to the same quarter-acre; and sorrel still remaining and growing, and "marl-burnt" corn, may be seen not many yards apart. The only effectual means which I have found to attain anything like equal distribution, has been to measure by stepping, and marking with a hoe, each distance for a heap to be dropped. This has been done by myself for much the greater quantity of all the marl I have had carried out; as I never could have the measuring and marking of distances done with sufficient accuracy by the drivers. If the field had been left in beds, or the rows of the last previous ploughing are visible, it will much facilitate the marking. Otherwise, rows must be marked by the plough in one direction, or measuring poles must be set up at each extremity of the rows for marl, to mark the cross-distance as well as to guide the direction of the rows. The thus placing the heaps at regular or average distances is the best security for regular distribution of the marl in spreading. But nevertheless the latter operation ought to be carefully watched, and made as uniform as will serve for thorough and equal diffusion through the soil, with the subsequent aid in tillage, of ploughing and harrowing.

Some extensive marlers, before commencing on a field, have it marked off by a plough for the placing of the heaps of marl. If the land is in beds, cross-furrows only are needed. If the surface is smooth, it must also be marked at right-angles. In either case, the field is thus marked off into rectangular spaces, in each of which a heap of marl is dropped, and over the whole of which space it is afterwards to be spread. But I found this mode more objectionable than the former. The drivers have so much latitude, that they are very careless as to where they drop their heaps within each rectangle; and the spreaders have more labor, to distribute the marl equally, and therefore are more apt to neglect it. Besides, it is often requisite to alter the distances of the heaps, either because of change of soil, or because of change in the sizes of the loads, owing to altered condition of the roads.

Marling Tables and Estimates.

The following tables may be useful in facilitating calculations, and promoting the important object of applying marl in equal and uniform quantities, according to the quality of the marl and the wants of the soil; which object however is generally so little regarded, that few persons attempt by calculation to reach any of the results, which these tables are designed to show by mere reference.

TABLE I. *showing the number of cubic feet of dug marl, (as compressed by its weight in the loaded carts,) necessary to furnish one per cent. of carbonate of lime to the acre of soil, for the ploughed depth stated:*

Marl containing of carb. lime	3 inch.	4 in.	5 in.	6 in.	7 in.	8 in.
per cent.	cubic feet of marl.					
10	1089.	1452	1815	2178	2541	2904
20	544.5	726	907.5	1089	1270.5	1452
30	363.	484	605	726	847	968
40	272.25	363	453.75	544.5	635.25	726
50	217.8	290.4	363	435.6	508.2	580.8
60	181.5	242.	302.5	363.	423.5	480.66
70	155.57	207.43	259.28	211.14	363	414,86
80	136.12	181.5	226.87	272.25	317.62	363
90	121.	161.33	201.66	242	282.33	322.66
100	108.9	145.2	181.5	217.8	254.1	290.4

TABLE II, *showing the number of even bushels of marl (as compressed by its weight in the carts,) necessary to furnish one per cent. of carbonate of lime to the soil, for the tilled depth of*

Marl containing per cent. of carb. lime.	3 inch.	4 in.	5 in.	6 in.	7 in.	8 in.
10	875.1	1166.8	1458.5	1750.2	2041.9	2333.6
20	437.55	583.4	729.25	875.1	1020.95	1166.8
30	291.7	388,93	486.17	583.4	680.63	777,87
40	218.77	291.7	364.62	437.55	510.47	583.4
50	175.02	233.36	291.7	350.04	408.38	466.72
60	145.85	194.46	243.08	291.7	340.31	388.93
70	125.01	180.97	208.36	250.03	291.7	333.37
80	109.38	145.85	182.31	218.77	255.23	291.7
90	97.23	129.64	162.05	194.46	226.88	259.29
100	87.51	116.58	145.85	175.02	204.19	233.36

TABLE III, *showing the number of rectangular spaces, of various dimensions, in an acre of land.*

Yards.	Sq. yds.	Rectangular Spaces.	Yards.	Sq. yds.	Rectangular Spaces.
15x15	=225	22	12x10	=120	40
15x14	=210	23	12x 9	=108	44
15x13	195	25	12x 8	96	50
15x12	180	27	12x 7	84	57
15x11	165	29	12x 6	72	67
15x10	150	32	11x11	121	40
15x 9	135	36	11x10	110	44
15x 8	120	40	11x 9	99	48
14x14	196	24	11x 8	88	54
14x13	182	26	11x 7	77	62
14x12	168	29	11x 6	66	73
14x11	154	31	10x10	100	48
14x10	140	34	10x 9	90	53
14x 9	126	38	10x 8	80	60
14x 8	112	43	10x 7	70	69
14x 7	98	49	10x 6	60	80
13x13	169	28	10x 5	50	96
13x12	156	31	9x 9	81	59
13x11	143	34	9x 8	72	67
13x10	130	37	9x 7	63	76
13x 9	117	41	8x 8	64	75
13x 8	104	46	8x 7	56	86
13x 7	91	53	7x 7	49	98
12x12	144	33	7x 6	42	114
12x11	132	36	6x 6	36	133

It is scarcely necessary to direct the application of these tables to practical operations; and therefore a single example only will be offered. Suppose a farmer's marl contains about 40 per cent. of carbonate of lime, and he wishes to give 1 per cent. to his designed tilled depth of 5 inches. He takes the number 40 per cent. in the first column of Table II, and passes thence in the same horizontal line across the table until reaching the column headed "5 inches." The number at the intersection is 364.62, the number of bushels of marl required. Next, to apportion this quantity to the acre. The heaps he can most conveniently make, we will suppose, will be 8 bushels. Dividing 364.62 by 8, gives about 45½ heaps required for the acre. Then referring to Table III, for that number of spaces, or the nearest to that number, in an acre, it is seen that the distances of

14x 8 yards, will make 43 heaps.
13x 8 " " 46 "
11x10 " " 44 "

Either of these quantities would be suitable enough; and the farmer would choose the distances which will best suit his width of ploughing. If desiring more perfect exactness, it could be easily obtained by adding to or deducting from one of the dimensions the necessary fraction of a yard.

Heaped bushels of loose marl, as measured separately, do not vary much from the same number of even bushels, as compressed in a cart body, by its own weight, and by the travel to the field. I find reference to bushels more convenient than to cubic feet. But if preferred, the same desired results may be reached by using Table I, and cubic feet as the measure instead of bushels.

The measuring of marl, in a half-bushel measure, for the purpose of determining larger quantities, is but a rough and uncertain method, which is only to be relied on, when the average is taken of many such trials. The irregularity of the lumps of marl, when first dug, and the uncertainty of the degree of heaping of the measure, may make even the same kind and condition of marl appear to vary in quantity and weight, by 6 or 8 pounds in the bushel. Besides other smaller trials, at other times, I made the following measurements and weighings of a single load of marl, of which the report may be of use for comparison:

A load of marl, just dug, was thrown into the cart, as usual, by shovels. The heaping of the load rose 7 inches, in the middle, above the top of the cart body. (Lumpy and moist marl may be heaped much higher than dry and pulverized.)—This was about the ordinary degree of heaping, when the roads were in the firmest state. The load was drawn to my barn, 2000 yards of the route to the field, and there measured by the half-bushel, heaped, and each separate measure weighed. The weights varied from 49 to 56½ lbs. of the 39 half-bushel measures (19½ bushels) which the load filled. The whole load weighed 2050 lbs. and the average weight of the heaped bushel was 105.16 lbs. This marl was of the kind I have altogether used at Marlbourne, [to 1850]—compact clayey marl, partly in lumps, moist naturally in its bed, but free from any other water.

The inside dimensions of this two-mule cart body were these:

Average of length, inches, 60.87
" width, " 40
" depth, " 15.16;

which make 21.36 cubic feet, or 17.12 even bushels of capacity. (A bushel contains 2150.6 cubic inches.) But, it should be observed, that the compression of the marl by its own weight, as thrown into the cart, and still more by the settling during the travel to the field, permits and causes more bushels of marl (if previously measured) to be put into the body than would be indicated by its cubic capacity. Thus, into the cart described above, at another time, the marl was put in at the pit by a half-bushel measure, heaped as usual—and which heaping certainly added as much as 20 per cent. to the even measure. Yet 16 bushels (the measure being thus heaped,) were required to fill the cart even. (If thrown in, as usual, by shovels, still more marl would have been put into the same space, by its falling more heavily from the shovels than from the half-bushel.) Upon this even filling of the cart, (the 16 heaped bushels,) more marl was added, to the amount of 5 bushels of like heaping measurement, making 21 heaped bushels in all. This raised the heaping of the cart higher than usual, though not too much to be carried without waste. After being driven to the field, rather more than 1½ miles, the then heaping part of the load alone was carefully taken off, and measured by *even* half-bushels; but each filling being pressed into the measure moderately, which was supposed to give a degree of compactness equal to the remaining lower part of the road, caused by its weight and the travel. This quantity made 3½ of such even bushels; the difference between which and the 5 heaped bushels put on in heaping at the pit, was owing to the settling of the whole load by its weight and the travel.

The remaining *even* and compressed filling of the cart body, by cubic measurement of its capacity, as stated above, was (21.36 cubic feet, or) 17.12 even bushels. Add to this the 3½ even and compressed bushels of the heaping (after its being set-

tled by the travel,) and the quantity of the whole load is (17.12x3.50=) 20.62 compressed and even bushels, equal to 21, loose and heaped, as measured at the loading. Therefore it may be considered that a *heaped* bushel of loose and moist marl is about equal, when compressed, to the same measure *even* full.

From all these and other trials and observations, combined and compared, I consider the following quantities as sufficiently close approximations to the truth:

A heaped bushel of this and similar marl, loose, as dug, weighs 105.16 lbs.

An even bushel, compressed, weighs about the same.

The load of a proper two-mule cart, for roads in good order and over firm land not varying much from level, is 18 to 19 heaped bushels—or 1900 to 2000 lbs.

Weight of a cubic foot of this marl, in the bed, is 120¼ lbs. (determined by trial of a smaller measured solid.) By two different trials, of pits measured by their cubic dimensions in the bed, one of 1052 cubic feet yielded 1103 heaped bushels of marl, as dug, and measured by the estimated cart-loads; and the other, of 1475 cubic feet in the bed, yielded 1675 heaped bushels. These estimates would respectively make the cubic foot weigh about 111 and 119 lbs. Of course these were not exact measurements, either in the bed, of feet, or in the carts, of bushels.

10 cubic feet of marl, measured in the cart-body, and as compact as made by its own pressure and the travel, are equal to 8.03 (say 8) even bushels, in the same state of compactness;—and may be taken as equal to the same number (8) of heaped bushels, loose as when dug.

In marls of equal degrees of moisture, the weight will be greater in proportion to the quantity of silicious sand in each; and, in a less degree, also to the soundness and compactness of any shells contained. In marls similar in these respects, of course the weight will be in proportion to the wetness. The lightest marl I ever worked, which was as dry as any earth could naturally be, did not weigh less than 100 lbs. to the heaped bushel.

Some or all the foregoing suggestions of facilities and expedients, or perhaps some better plans, might perhaps occur to most persons before they are long engaged in marling. Still these directions may help to smooth away some of the obstructions in the way of the inexperienced; and they will not be entirely useless, if they can serve to prevent even small losses of time and labor.

It is impossible to carry on marling to advantage, or with any thing like economy, unless it is made a regular business, to be continued throughout the year or a specified portion of it, by a laboring force devoted to that purpose, and not allowed to be withdrawn for any other. Instead of proceeding on this plan, most persons who have begun to marl, attempt it in the short intervals of leisure afforded between their different farming operations—and without lessening, for this purpose, the extent of their usual cultivation. Let us suppose that preparations have been made for such an attempt, and on the first opportunity, a farmer commences marling with zeal and spirit. Every new labor, however, is attended by causes of difficulty and delay; and a full share of these will be found in the first few days of marling. The road is soft for want of previous use, and, if the least wet, soon becomes miry. The horses, unaccustomed to carting, balk at the hills, or carry only half loads. Other difficulties occur from the awkwardness of the laborers, and the inexperience of their master—and still more from the usual unwillingness of the overseer to devote any labor to improvements which are not expected to add to the crop of that year. Before matters can get straight, the leisure time is at an end. The work is stopped, and the road and pit are left to get out of order, before making another attempt some six months after, when all the same vexatious difficulties are again to be encountered. It is therefore not at all surprising that many zealous beginners have been discouraged by the bad management of their first operations; and have abandoned all effort to marl, until after years of delay, and when again induced to resume by the success and profit of others who had not limited their marling labors to leisure times only.

If one horse or mule, only, is employed in drawing marl throughout the year, at the moderate allowance of 200 working days, and 100 bushels carried out for each day, the year's work will amount to 20,000 bushels; or enough for the first dressing of 80 acres, at 250 bushels. This alone would be creating a great value, and obtaining a great profit upon the outlay of expense. But, besides, this operation would allow the profitable employment of any amount of additional and available force. When, at any time, other teams and laborers could be spared to assist, even if but for a day or two, every thing would be ready for them to go immediately to work. The pit is well drained, the road is firm, the bridges in good order, and the ground for the marl marked off and ready to receive the loads. In this manner, much work may be obtained, in the course of the year, from teams which would otherwise be idle, and laborers whose other employment would be but of little importance.—Also the spreading of marl on the field is a job that will be always ready to occupy spare labor—(unless the marl is clayey and also very wet;) and the removing earth to uncover marl may be done when rain, snow, or severe freezing weather has rendered the earth unfit for almost every other kind of work.

Refreshment Stands at the Show Grounds.

To the Editor of the American Farmer—

Respected Sir:—I wish to know (as a subscriber, and one who feels an interest in the welfare of your success and the cause you advocate) of what practical benefit was it, at our late Cattle Show, to have on the ground a stand for the sale of alcoholic drinks, when taverns abound in every possible nook and corner of the city and its vicinage? I do not wish to write an essay on temperance, but only to ask the simple question above. Knowing that you are a man that wishes to do good in your day and generation, and not only to get *good*, but to impart the same to all that you possibly can, I do not believe that you wished to see it in there, if you would from your heart speak the truth, the whole truth, and nothing but the truth. I feel aware that yours is a delicate position, and I shall not push the question on you, (in the singular number) but would wish to know if there was any real good to proceed from such a course? I know of two members of the Society that have said unless this practice is abolished, they will be so no longer, (that is, members.) I am not a member, you are well

aware, but should my life be spared, will be one day; but I wish, for the sake of the *sacred* cause of *temperance*, to see a bar on the premises no more, and this is the earnest wish of some of your most influential members; and I look to you, as one clothed with some little brief authority in these things, to mix a little of this thing in the general compost that is for the fertilizing of both soul and pocket of the farmer, and not to suffer such a deep-rooted weed, when once having taken hold, to enter again within the enclosure, to drop its baneful seeds upon those minds that upon such occasions converge there from all the points of our State, to be wafted home and spring up and bear the bitter fruits of death to both soul and body.

Your humble servant, &c.

FRANCIS H. GRUPY.

Jerusalem Mills, Harford County, Md.

In reply to our correspondent, we would say, that the practice alluded to is not in accordance with our wishes, nor do we think, with the desire of the Executive Committee of the Society; and before the reception of his note, and after the late Show, the subject had been informally canvassed by some of the most active members of the Board. The practice of selling liquors on the ground was in a measure forced upon us, originally—at the first show on grounds entirely under our controul, we advertised for proposals to rent the stands for the sale of refreshments, and expressly stipulated in the advertisement, that spirituous liquors should not be sold—and no offer could be obtained on any terms for the privilege. Knowing that thousands of strangers would be on the ground who would desire to spend the day there, and that it was our duty to provide for their bodily comforts, we were reluctantly compelled to dispense with the requirement noticed; in order to induce caterers to be present to minister to the necessities of the people.—We think our original intention may be hereafter accomplished, and we certainly will give it a cordial support.

AGRICULTURE FOR SCHOOLS.

Under this title, the Rev. *John L. Blake*, of Orange, New Jersey, has published an admirable work—one which, with decided advantage, could be introduced into every school in the country. It comprises much that is selected, both in prose and verse, and a good deal of original matter. The selected matter has been judiciously made, well calculated for the reading and recitative purposes of students, as well as to give a moral tone to their feelings and principles—and so miscellaneous in subjects withal, as to continue the interest of the youthful reader. The agricultural matter interspersed throughout the book, is of a highly scientific character, conveyed in the way of *questions* and *answers*, and so simplified, as to bring the meaning of the definitions within the comprehension of even the most superficial readers. In this respect, the author has been most happy indeed. He has so simplified the *technical phrases of science*, as to disarm them of that awe in which they are usually held by the uninitiated, and to give encouragement and excite an interest in those who may read his excellent book. Though intended for schools, it is as well adapted to *adults*; for we know no work of the same size, wherein there can be found so much of what may be termed agricultural science made easy.

Among the agricultural matter, there is a chapter, explanatory of the "Scientific Terms in Agriculture"—one on "Agricultural Chemistry"—one termed "Physiological Reflections on Water"—one on the "Organic Structure of Plants"—one on the "Elementary Constituents of Plants"—one on the "Food of Plants"—one on "The Practical use of Leaves"—one on "The Theory of Manures"—one on "The Nature and Variety of Soils"—one on "Vegetable Manures"—one on "Animal Manures"—one on "Mineral Manures"—one on "Approved Modes of Tillage"—one on "Agricultural Implements"—one on "Rotation of Crops"—one on "Exhaustion of the Soil"—one on "The Distribution of Plants"—one on "Animal Physiology"—one on "The Formation of Soils"—one on the "History of the Ox," descriptive of the character of several of the most esteemed breeds of cattle—one on the "Change of Material Substances"—one on "Milk, Butter and Cheese"—one on the "Theory and Practice of Farming"—one on "The History of the Horse"—one on the "Influence of Science on Agriculture"—one on the "History of Feeding Animals"—and one on the "Utility and Profit of Fruits."

The above subjects are all of deep interest, and so treated as to be understood by all, while they display a degree of research, profound knowledge, and acute discrimination, worthy of all praise. Among the selected articles we find some *extracts* from Agricultural Addresses—prominently among these, are *extracts* from the able addresses delivered by the Hon. *James A. Pearce*, and the Hon. *Willoughby Newton*, before the *Maryland State Agricultural Society*—addresses, by the bye, that deserve to be treasured as *models*, for they combine practice with theory, elevate the mind, and interest, while they enlighten and instruct.

VARIETY OF DUCKS.—The Albany Cultivator for December, contains the following description of a variety of ducks, the great weight of which, and the number of eggs which they lay in a season, induces us to copy the article. The Editor says:—

"We saw at Col. Sherwood's in Auburn, last summer, a variety of Ducks, and on inquiry, were told that they were obtained from Mr. John S. Clark, of Troopsville, Cayuga county. We were so much interested in their appearance, especially from their striking resemblance to the wild black duck, (*Anas obscura*,) that we wrote to Mr. Clark to learn their history. In reply, he said—The ducks you inquire about, have been bred distinct from any other variety, at least twenty years. We obtained them some ten years since, in Orange County, and were then told that they were originally descended from the wild black duck, and from the great resemblance, I have no doubt the statement is true, but cannot affirm this as a certainty. The characteristics of this variety are nearly a uniform color, [a little darker than the wild black duck,] good size, attaining the weight of 8 pounds, * dressed, at four months old, very quiet, and very prolific, one duck laying from 150 to 200 eggs in a season, with proper care. There are some in this vicinity which have lately acquired a *top-knot*, equal to any Poland fowl." We have lately received from Mr. Clark a pair of these ducks, which fully answer the above description. The drake has the top-knot in perfection. There also came with this pair, a couple of wood, or summer duck—the handsomest of all the duck family."

* If there be no error, these ducks attain an extraordinary weight. Eight pounds per pair, at 4 months old, would, indeed, be very heavy, but 8lbs. as the weight of an individual bird, at that age, is calculated to excite our special wonder.—*Ed.*

AMERICAN FARMER.

BALTIMORE, JAN. 1, 1852.

TERMS OF THE AMERICAN FARMER.

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Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

FIRST OF THE YEAR.—The subscriptions of a large number of our readers are renewable with this No.—We ask a prompt attention to this hint. Those who know themselves indebted to us, will oblige by an early remittance—a general settling up is desirable at the beginning of the new year.

MEETING OF THE EXECUTIVE COMMITTEE OF THE MARYLAND STATE AGRICULTURAL SOCIETY.—The regular quarterly meeting of the Executive Committee will take place on the *first Wednesday* in *February*, at 10 o'clock, at the hall of the Society in Baltimore. By order,

SAM'L. SANDS, Sec'y.

EDMUND RUFFIN, OF VA.—We conclude in this No. the paper from the pen of this eminent agriculturist, on the use of Marl. It will, like every thing emanating from the pen of this gentleman, be read with interest by a large portion of our readers.

In "*De Bow's Review*" for Oct. published in New Orleans, (a monthly Industrial and Literary Journal, devoted to Commerce, Agriculture, Manufactures, &c. of the highest character, the circulation of which, we are surprised to find, so limited in this quarter,)—under the head of "Gallery of Industry and Enterprise," we have a Memoir, with a portrait of Mr. Ruffin, embracing a view of Agricultural Progress in Virginia for the last 30 years. This paper, we have understood, is from the pen of an eminent son of the Old Dominion, and feeling conscious that we shall be rendering an acceptable offering to our patrons in the South by transferring it to our columns, we shall at as early a day as practicable, present it to our readers. The time is now at hand, when those who have distinguished themselves by the greatest number of victims they have slaughtered by the Moloch of War, and the consequent misery brought upon their fellow creatures, are not alone to continue to receive the honor and glory of a nation's gratitude,—but those who, like Mr. Ruffin, have labored to meliorate the condition of their kind, and have made *more* than "two blades of grass to grow where but one grew before," are to enjoy their favors, and have a high rank in the niche of fame. No man has done more to advance the prosperity of Virginia than Mr. Ruffin—and the State should give some solid evidence of its appreciation of his transcendant merits.

ANOTHER EDITOR GONE.

Mr. S. W. Cole, late editor of the *New England Farmer*, and former editor of the *Boston Cultivator*, died at his residence in Chelsea, Massachussetts on the 3d of last month. As an agricultural writer, he was one of the ablest in the country; his works on the *Diseases of Animals*, and on *Fruits*, are among the best upon the subjects upon which they treat, and will preserve his memory in freshness with every agriculturist whose heart responds to benefits conferred. We have been an *instructed* reader of his for many years, felt that we were largely his debtor, for he never attempted to write but when he had something to say, always expressed himself with clearness and force, and speaking, generally, from his own practical experience, never failed to impart information that was worthy of being treasured up in the memory.

It is only a few "little months," that we were called to announce the melancholy death of the *father* of Agricultural learning in America,—and now, another who toiled intelligently and zealously in the same noble calling, is gone to the home of his fathers; but their works will live after them. Peace to their *manes*, and cherished be their names. The fruits of their labors are to be seen throughout our broad and far-reaching country, and will continue to increase in luxuriance and beauty, for their teachings being founded on the wisdom that lasts, will flourish in the future as well as in the present.

PEA CULTURE.—We give on another page an admirable communication on the *Pea culture, descriptive of the properties of several kinds*. It is a paper full of interest to farmers generally, but particularly to those of the South. As a crop for ploughing in, it cannot be too highly appreciated. With the pea to turn under, when in bloom, and the *marl* he speaks of, we would undertake to make almost any soil productive. If the pea be ploughed under when it first comes into blossom, two crops in a single year might be grown and turned under, which would, aided by a dressing of marl, infuse new life into the soil, and wake up its latent energies. Two crops of pea-vines, thus grown and ploughed in, assisted by one or two hundred bushels of marl, would prepare even a poor soil for a crop of wheat, and enable it to be seeded to clover. But deep ploughing must be brought in as an adjunct.

There is one thing in which our esteemed correspondent is at fault. It was of the "*Mexican Bean*," and *not* of the *Mexican Pea*, that we spoke in connection with the delicious "*soup*" we had partaken of at a friend's farm; though we have great faith in pea-soup.

For the American Farmer.

Indelible Ink for marking labels for trees, shrubs and flowers.

MR. EDITOR:—I am so much pleased with an article of ink for writing on zinc, made by Mr. Hy. H. Kelly, No. 288 N. 2d street, Philadelphia, that I have been induced to inform you of it, that you might publish it for the benefit of your readers.—It is a black ink, writes beautifully on zinc, and will bear exposure to the weather for many years. It can be obtained of Mr. Kelly for $1 per pint.

I know of no method of labelling trees so economical as to cut small cards of zinc, mark them with this ink, and attach them to trees by a loop of copper wire. JOHN WILKINSON.

Mount Airy Agricultural Ins.,
Germantown, Pa., Dec. 6th, 1851.

Old Gardens.—The soils of old gardens, would be greatly benefitted by having a dressing of lime given them in the fall or winter.

AGRICULTURAL IMPLEMENTS, &c.—Our readers are referred to the advertisement of the Messrs. Allen & Co. of New York, which will be found on another page—This house is most extensively engaged in the manufacture or sale of every thing required for agricultural purposes, and is well known throughout the U. S. Catalogues it will be seen, will be furnished to those wishing them.

☞ We refer those interested to the advertisement of Mr. Key, offering for sale his fine young stallion Beverly, which took the premium at our State Fair in 1850—Benj. Ogle Tayloe, Esq. of Washington, in a letter to the editor, thus speaks of this horse:—"Beverly, as far as I can discover, is very high bred, combining the best blood of England, of late years, such as that of Priam and Musgrove, (Derby and St. Leger animals—renowned, too, for their descendants,)—and descended from the most renowned horses of our own land, such as Sir Archy and Florizel—near lineal ancestors of the unsurpassed Boston."

PRESIDENT'S MESSAGE.—The President in his late Message to Congress, reiterates his recommendation for the establishment of an Agricultural Bureau—he says:

"In my last annual communication to Congress I recommended the establishment of an Agricultural Bureau, and I take this occasion again to invoke your favorable consideration of the subject.

"Agriculture may justly be regarded as the great interest of our people. Four-fifths of our active population are employed in the cultivation of the soil, and the rapid expansion of our settlements over new territory is daily adding to the number of those engaged in that vocation—Justice and sound policy, therefore, alike require that the Government should use all the means authorized by the Constitution to promote the interest and welfare of that important class of our fellow-citizens. And yet it is a singular fact that, while the manufacturing and commercial interests have engaged the attention of Congress, during a large portion of every session, and our statutes abound in provisions for their protection and encouragement, little has yet been done directly for the advancement of agriculture. It is time that this reproach to our legislation should be removed; and I sincerely hope that the present Congress will not close their labors without adopting efficient means to supply the omissions of those who have preceded them.

"An Agricultural Bureau, charged with the duty of collecting and disseminating correct information as to the best modes of cultivation, and of restoring the fertility of the soil, and of procuring and distributing useful seeds and plants and other vegetable productions, with instructions in regard to the soil, climate, and treatment best adapted to their growth, could not fail to be, in the language of Washington, in his last annual message to Congress, a "very cheap instrument of immense national benefit."

Management of Milch Cows.—"A Subscriber" who asks for directions as to "*the feeding and treatment of Milch Cows through the winter,*" is referred to our "*monthly work on the farm,*" wherein, during any winter month, he will find ample directions.

He also asks,—"Are Pumpkins of any value as food?"

To this question we reply, that in our opinion, there are few vegetable productions that can be rendered of greater value, as food either for Milch Cows or for Hogs. In feeding them, their value is greatly increased when fed to milch cows, by cooking, and it matters not whether that be done by *boiling* or *steaming* them. When cooked they should be reduced to the consistence of slop by boiling water, mashed and mixed with cut hay or straw, and have added to every mess for a cow, say, to every half bushel, 1 or 2 pints of corn meal, or corn and cob meal, or 1 gallon of bran. With such feed, if a cow be kept clean and warm, and otherwise well attended to, she will not only give rich milk in winter, but give it in liberal quantity.

For Hogs the Pumpkin should also be cooked, mashed, made into *swill*, with an addition of corn meal, say a pint to every two gallons of the swill, which quantity will make a full feed for a full grown hog, and half the quantity for one half grown, while pigs should receive a less quantity; the quantity to be graduated by their size. The *troughs* in which swine are fed, should be washed out daily; though swine are supposed to be gross, nay, dirty feeders, it is nevertheless true, that they thrive best where cleanliness is observed, both as regards their sties and feeding. It is a fact which may be set down as a *fixed* one—the more cleanly hogs are kept, the better will they prosper, and the less liable will they be to diseases.

"*Commentator*" is received, and will appear in our next.

Christmas Present.—We are indebted to S. Z. C. Brown, Esq. of Carroll Co. for a pair of capon fowls, weighing about 8 lbs. each, for our Christmas dinner.

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

During the present month there has been no large transactions in Tobacco, but what has been bought up, was bought in small parcels; the principal sales being confined to that description called Ground Leaf, of which a much larger quantity has been secured and sent to market this season, than for many years past, and in consequence of which prices for it have fallen off since October very considerably. There is a great apathy on the part of buyers, for all descriptions, but we hope to see considerable activity in the market before spring. We quote sales of dark frosted Tobacco at $2¾ to $3; sound dark crop and second at $3 to 3½; middling do. $4 to 4½; good red and yellow do. $5 to 6; extra fine do. $7 to 8.

Wheat has advanced, and sells now at 82 to 88c. for red, and 92 to $1 for white. New Corn at 52 to 53c., and old do. at 54 to 55c. Rye, 70 to 75c. Oats, 30 to 35c.

Beef Cattle ranges from $2½ to 4 per 100 lbs. on the hoof, equal to $5 a 7.75 net, and averaging $3.75 gross—Hogs, $6 to 6.25.

Guano, less than 10 tons of 2000 lbs. $45, cash—10 tons or more, $44—50 tons, $48 per ton of 2240 lbs.

Flour, Howard st. $4; City Mills $4 a 4.12—Rye Flour $3.62 a 3.75—Cloverseed $4.87 a $5—Hay, sales of Timothy $13 per ton for prime—Wool, very little doing, and no change in prices to note—Whiskey 21½ a 22c.—Linseed Oil 66c.—Cotton, owing to the foreign news being unfavorable, may be considered a shade lower—Spirits Turpentine 36 a 38c.

Maryland State Agricultural Society.

ENTRIES

Made at the Annual Exhibition for 1851.

PREMIUM ANIMALS.

[*Those who have heretofore taken first Premiums.*]

C. B. Calvert of P. George's, entered Durham bulls Potomac and Gilderoy, and Cows Alberta and Flora; and Alderney cow Cynthia.—J. N. Goldsborough, of Talbot, Durham cow Sally Walker, 9 yrs.—A. B. Davis, of Montgomery, Devon cow Effie, 8 yrs., and Devon bull Springfield, 3 years.—C. P. Holcomb, of Delaware, South Devon cow, 7 years.—W. B. Dobbin, of Howard Co. Holstein bull Prince Puckler Muscau.

CATTLE OVER 3 YEARS OLD.

Devons—By Geo. Brown, Balt. Co. imported cow, with calf 11 weeks old, and half Devon cow with calf 7 weeks old—Jno. Glenn, Balt. city, cow Lizzie, 10 yrs. old—Odin Bowie, of P. George's, Lavender Girl, 6 yrs., Maid of Lodi, 5 yrs.; Beck, 5 yrs.; Julia, Rose and Flora, each 3 yrs.—Louis Bailey, of Fairfax, Va. cow Virginia, 3 yrs.—Hy. Crowl, of Balt. Co. a cow, 5 yrs., and a bull 3 yrs. old—E. Lewis, of Harford Co. 3 cows and 1 bull—C. P. Holcomb, of Delaware, 8 cows, various ages—Sam'l Sutton, Balt. Co. one cow—Ch. Carroll, of Howard Co. cow Red Rose—Stephen T. C. Brown, Carroll Co. a bull and cow.

Durhams—Geo. Brown, a cow 6 years old—Jno. Merryman, of Balt. Co. bull Darby, 3 yrs.—Johns Hopkins, Balt. city, a bull 5 yrs.—Jno. Glenn, cow and calf—Jas. N. Goldsborough, of Talbot Co. Sally Walker, 9 yrs., Chester Bell, 3 yrs. with her second calf—Jno. Stewart, Balt. city, Cinderella, 6 yrs.—E. T. Ellicott, Balt. city, Lucinda, 10 yrs.—Ch. Carroll, bull Jupiter; cow Mary and calf—Ch. Calvert, of Prince George's, bull Montrose, 5 yrs.; cows Cinderella, Jessie, Daphne, Indiana, Atalanta, Dolly, Pocahontas, Almira, Columbia, Alice, Kate, Cherry, Rosalie, Clementina, Metamora, Eugenia, Corinne, Ella—Clement Hill, of P. George's, bull Riversdale, and cow Kate, each 3 years—Thos. J. Rusk, of Balt. city, fat cow, 4 yrs. and a 5 year old steer—B. M. Dennis, Balt. city, Jenny Lind, 4 yrs.—Aaron Clement, of Phila. Milk Maid, 4 yrs., Dutchess, 6 yrs., Red Rose and Countess, 3 yrs. and others not named—Sam'l Sutton, of Howard Co. cow 7 yrs.—Chauncy Brookes, of Balt. city, Molly, 3 yrs.—Wm. D. Morris, of Cecil Co. 1 pair steers, 3 years—C. T. Williams, Balt. Co. bull John.

Natives and Grades—Ch. Carroll, cow Strawberry—Jno. Merryman, jr. Spanish cow Isabelle, 10 years; half Spanish Black Beauty, 7 years; do. Nannie; and native and Spanish cow Nannie, 6 yrs.—L. Tiernan Brien, of Balt. Co. native cow Mary Blane—J. B. H. Fulton, Balt. Co. bull Frank, 3 yrs. and cow Blossom, 8 yrs.—Wm. Richardson, Fred. Co. native cow 5 yrs. and her calf 4 mos.—Zenos Barnum, of Balt. native cow Peggy Perkins, 9 yrs.—J. N. Goldsborough, native grade cow Verbena, 4 yrs.—John Stewart, bull Bolivar, 4 yrs.—Ramsay McHenry, of Harford, grade cow Delaware, 6 years—Geo. Y. Worthington, of Howard Co. Holstein and native bull 3 yrs.; 2 Durham and native cows, 8 and 4½ yrs.—Peter Zell, Balt. city, Ayrshire and Holstein cow, 6 yrs.—C. B. Calvert, ⅞ Durham and ⅛ Devon bull Oceolo, 3 years; ½ Alderney and half Durham cow Star, 8 years—David S. Sumwalt, Balt. Co. native cow Rose, 7 yrs.—Hy. Mankin, Balt. Co. native cow Rose—A. Clement, 3 grade cows—Henry Crowl, Devon and native cow Ann, 7 yrs.—Sam'l Sutton, Devon and Alderney cow—C. T. Williams, Blossom, 8 years, same breed.

Alderneys—John Glenn, cow and calf—C. B. Howard, Balt. Co. bull and 2 cows—A. Clement, cow Butter Cup, 6 yrs.—Hy. Crowl, cow Fancy, 4 yrs.—E. T. Ellicott, Swiss cow Mary Jewell, 4 years.

Holsteins.—Z. Barnum, cow Dutchess, 5 yrs. and Regina, 7 mos.—G. W. Lurman, Balt. city, imported cow Lizzie, 3 yrs.—Wm. B. Dobbin, Howard Co., bull Prince Muscau, 7 yrs.; cows Rosette, Hildegarde, and Fair Star, over 3 yrs.—B. M. Dennis, Balt. city, cow Rosette, 8 yrs.—C. C. Brown, Howard Co., cow Diana Vernon.

Ayrshires.—G. W. Lurman, cow Fanny, 8 yrs.—Ramsay M'Henry, imported bull Robert Burns, 6 yrs.; imported cow Nannie, 9 yrs.; cow Jenny Dean, 8 yrs.; Princess Mary, 6 yrs.; May Queen, 5 yrs.—Jno. Ridgely of H. Balt. Co., cow Anna, over 3 yrs.—G. Y. Worthington, cow Young Blossom—C. B. Calvert, cow Europa, 10 yrs.—Rowena, 8 yrs., and Die Vernon, 4 yrs.—Thos. J. Rusk, cow 3 yrs.—Hy. Mankin, cow 4 yrs.

CATTLE BETWEEN 2 AND 3 YEARS.

Natives and Grades.—Johns Hopkins, of Clifton, Balt. Co., entered 5 cows and 3 calves—S. B. D. Jones, of Somerset Co., mixed bull, Native, Durham and Devon, 2 yrs.—G. Y. Worthington, 2 Holstein and Native Heifers, 2 yrs.—Robt. Sinclair, Sen., Balt. Co., Devon and Native Heifer—W. B. Dobbin, Holstein and Durham Heifer.

Durhams.—Jno. Glenn, a bull over 2 yrs.—J. Q. Hewlett, of Balt., bull Magnum Bonum—Clement Hill, heifer Rosette—C. B. Calvert, Roberta, 26 mos. and Jesse 2d, 2 yrs.—A Clement, Woodbine and Lilly, each 2 yrs.—Rev. James M'Intyre, of Car., bull Sir Charles, 2 yrs. and 2 mos.

Ayrshires.—Hy. Frizell, of Harford, heifers Agness and Princess Margery—Jno. Ridgely, of H., heifers Till, Mary and Dolly, each 3 yrs.; bull calf Forrest, 25 mos. and heifers Mary 13 mos. and Sally 25 mos.—Lewis Bailey, bull Henry, 2 yrs.; and a heifer, 2 to 3 yrs.—A Clement, a heifer 2 yrs.

Devons.—Oden Bowie, heifer Sweetheart, 2 yrs.—Lewis Bailey, heifer Beauty, 2 yrs.—S. T. C. Brown, Ellen, 2 to 3 yrs.—E. Lewis, 2 heifers under 3 yrs.—C. P. Holcomb, bull Farmington.—Wm. Baer, Carroll co. bull Bill, 2 to 3 yrs.

Holsteins.—C. Calvert, heifer Lucy, 18 mos.—C. C. Brown, Highland Mary.

Alderneys.—C. B. Calvert, Heifer Bertha, 24 mos.—Saml. Sutton, bull Commodore, 25 mos.

CATTLE UNDER 2 YEARS OLD.

Ayrshires.—Jno. Merryman, Jr. bull Highland, 13 mos.—G. W. Lurman, Fanny's calf, 9 mos., Henry Frizell, Bulls Roderick Dhu, 18 mos., Sir Walter Scott, 17 mos. and Allen Bane, 15 mos.; heifers Dutchess, 18 mos., Helen Mar, 18 mos., Beauty, 17 mos., Princess 18 mos., Countess 15 mos. and Fill Pail, 18 mos.—C. B. Calvert, Clorinda, 14 mos., Cora, 10 mos. and Ariel, 8 mos.

Natives and Grades.—Jno. Merryman, Jr., Durham and Spanish heifers Cleopatra, 12 mos. and Diana, 15 mos.; native heifers Adelaide, 18 mos. and Durham and Span. bull calf, 5 weeks—L. T. Brien, Ayrs. and Durham bull Ben Bolt, 18 mos.—J. B. H. Fulton, Durham and Ayrs. Bull 13 mos. and heifer Lucy, 13 mos.—G. V. Lurman, grade

calf, 9 mos—Hy. Frizell, grade heifer calf Jenny Lind, 16 mos.—G. Y. Worthington, native and Durham heifer 17 mos.; Alderney and Devon heifer 18 mos.; and Devon and Native calf 11 mos.—Peter Zell, mixed Ayrshire, Holstein and Durham heifer, 13 mos.—Odin Bowie, roan heifer Bella, 17 mos. and red and white heifer Bertha, 16 mos.—Clement Hill, red heifer Jane, 15 mos.—L. Bailey, heifer calf Dink, 4 mos.; 2 bull calves 4 mos. and 3 steer calves 4 mos.—Geo. P. Pfeltz, of Balt co. native heifer Jenny Lind, 12 mos. and Sally, 12 mos.—Dr. Arthur Pue, Howard co. a bull cross Holstein and Alderney, 15 mos.; heifers Mary, 12 mos.; Jenny Lind, 6 mos.; Jagella 6 mos.; and Mary and Sally, 4 mos.—E. T. Ellicott, Ayrs. and Durham heifer Millow, 1 yr. old.—Saml. Sutton, native bull and heifer; 2 Durham and Devon heifers, 16 mos. and a half Devon heifer, 14 mos.—C. C. Brown, Devon and Holstein bull Harold, 12 mos.—C. T. Withams, Devon and Ayrshire heifer Jenny Lind, 1 yr.; Alderney and Ayrshire calf, 3 mos. and heifer Daisey, 13 mos.—Love, Martin & Co. Baltimore city, 2 native calves, 3 mos.—N. M. Brian, Durham and Teeswater calf, 5 mos.—J. H. B. Fulton, heifer Lucy, 13 mon. and bull Star, 13 mos.—G. W. Lurman, grade Holstein heifers Theresan and Gertilda.

Holsteins.—G. W. Lurman, bull calf, 8 mos.—W. B. Dobbin, bull Othello, and heifer calf Adelaide—C. B. J. Mitchell, Q. Anne's co. heifer Molly, 1 yr.—C. C. Brown, a bull, 1 yr.—C. B. Calvert, heifer Lucy, 18 mos.

Ayrshires.—Hy. Frizell, bull calf Duke Buccleugh, 4 mos. and 4 heifer calves, 2 of 6 mos. and 2 of 4 mos.—Stephen T. C. Brown, heifer Jenny, 6½ mos.—Hy. Mankin, heifer calf, 7 weeks.

Alderneys.—C. R. Howard, a bull calf, 14 mos. and a heifer—C. B. Calvert, heifer Constance, 5 weeks; and 3 heifers and 1 bull, the heifers 12 mos. the bull 5 mos.—A Clement, bull calf, 4 weeks.

Durhams.—Jas. N. Goldsborough, heifer Magnolia, 15 mos. by Valentine out of Sally Watkins; bull Sheridan, 14 mos. and bull calf Puritan, 2 mos. out of Sally Walker—Clement Hill, heifer Ellen 14 mos. and bull calf Rover, 10 mos.—Chas. B. Calvert, heifers Id-, 10 mos. Ruby 2d. 14 mos. Clio, 13 mos. Addie, 9 mos. Oneida, 13 mos. and Rosalie 2d, 7 mos. and bull calf Baltimore—H. A. Wallard, of Washington, D. C. bull calf, 6 mos.—A. Clement, 3 bull calves and 1 heifer—James E. Myers, Balt. co. 1 calf, 3 mos.—S. Sutton, a heifer 13 mos.—Chauncy Brookes, bull Buck Eye, 20 mos. old, and heifer Mary, 4 mos.—S. T. Earle, of Queen Anne's, bull Riversdale, 12 mos. and heifers Jenny Lind and Kate, 17 mos.

Devons.—O. Bowie, Pr. bulls George, 1 to 2 yrs. and C. B. Calvert, 16 mos.—C. B. Calvert, a heifer 11 mos.—Lewis Bailey, heifer Virginia, 1 year, Jenny Lind, 1 yr. and bull calf Fairfax, 4 mos.—Hy. Crowl, calves Strawberry and Jenny Lind.—A. B. Davis, a bull calf 12 weeks old—S. T. C. Brown, a bull calf 4 mos.—E. Lewis, 2 bull calves—S. Sutton, 2 heifers—H. G. S. Key, St. Mary's, bull Tudor, 5 mos.—C. P. Holcomb, bull Plough Boy, 1 year; heifer Young Cherry, 1 year, and 11 calves between 7 and 9 mos.—W. R. & T. Hughlett, bull Bolingbroke, 12 mos.

Working Oxen, &c.

By E. P. Horne, Balt. Co. 1 yoke red oxen, Burton and Blazer, 5 years old; 1 yoke spotted do. 5 yrs., 2 yoke half Devon, 4 and 5 years and 1 do. mixed breed, 5 yrs.—Wm. Richardson, of Fred'k. Co. 1 yoke native oxen, 4 and 5 yrs.—Pearce Curll, Howard Co. Durham work bull Dragon, 2½ yrs.—Lewis Bailey, 2 pair working cows, 3 and 5 years, and 2 steers between 2 and 3 yrs.—S. G. Fisher, Cecil Co. 3 pr. working oxen, 28 mos.—C. P. Holcomb, 1 pair 4 yr. old working oxen—E. Lewis, 1 pair do. 2 yrs. old—W. D. Morris, Cecil Co. 1 pr. do. 8 yrs.

Fat Cattle and Sheep.

Fat Cattle—By C. T. Witham, 5 head Cattle—Lewis Bailey, 15 head fat Cattle—Jno. Merryman, jr. Spanish cow Isabelle, 10 years—Sam'l Sutton, Devon heifer Priscilla—E. P. Horne, yoke fat Oxen—E. Lewis, fat Heifer, weighing 1670 lbs. 4 yrs.—Wm. Richardson, 2 fat Steers.

Sheep—Wm. Jessop, Balt. co. 6 Wethers—Clayton B. Reybold, of Delaware, 7 fat Wethers, and 1 slaughtered Mutton—Hy. Carroll, jr. of Balt. co. 7 fat Wethers, one to be slaughtered—James N. Goldsborough, 1 slaughtered Mutton, mixed breed—Chas. Carroll, of Howard co. 10 half bred Cotswold Wethers—J. M. Turner, of Balt. 1 native or mixed slaughtered Mutton—Wm. Jessop, 1 middle wool slaughtered do.—C. B. Reybold, 1 long wool do.

Sheep.

Long Wool—By Wm. Jessop, 4 Bucks, 4 Buck and 4 Ewe Lambs—Jas. N. Goldsborough, 4 Cotswold Buck Lambs—C. B. Reybold, 1 imported New Oxfordshire Buck, 4 New Oxfordshire Ewes, 2 do. Bucks, and 4 do. Buck Lambs—Hy. Carroll, 1 New Oxfordshire Buck, and 4 Buck Lambs—J. M. Turner, 1 native Buck, 2 yrs.—Ch. Carroll, 5 Cotswold Bucks—B. Jackson, of Delaware, 3 Oxfordshire Buck Lambs—J. W. Ware, of Virginia, 2 improved Cotswold Ewes, imported, 2 and 3 yrs. old; improved Cotswold imported Buck and Ewes, 2 and 3 yrs. old, the buck 2 yrs.

Middle Wool—Jno. Merryman, jr. 3 South Down Ewes, 3 to 5 years and 1 Lamb, Oxfordshire and South Down, 1 native or mixed blood sheep, and 1 Oxfordshire and native buck, 2 yrs.—M. Tilghman Goldsborough, of Talbot co. 1 4-yr. South Down buck; 1 2-yr. do. do.; 5 1-yr. do. do.; 4 South Down ewe lambs, and 4 do. ewes—Hy. Carroll, jr. 1 Oxfordshire mixed buck—Hy. Frizell, 1 South Down buck, 3 years; 4 do. do. 1½ years and 11 do. lambs—Wm. C. Haviland, of Harford co. 3 ewes, mixed native, and 2 mixed native bucks, 1 yr. old—J. W. Ware, 1 yearling buck, and mixed ewes, 2 and 3 yrs. and 1 South Down buck, 2 yrs.—A. Clement, 3 bucks, 1 yearling and 2 two years old; 16 ewes over 1 year, and 3 ewe lambs.

Fine Wool—A. L. Bingham, of Vermont, 2 imported bucks and 1 buck lamb, 7 mos. old, all of French Merino—1 Fleece fine Wool, raised by Jesse Kendalworth, Washington co. Pa.—1 Fleece fine Wool, raised by A. Strouble, Fayette co. Pa. entered by Jas. Baynes, of Balt.

Swine.

Chester, Dutchess, and Crosses—F. S. Key, Balt. co. a Boar, 25 mos. old—J. Chandler Smith, Balt. co. 1 Sow 28 mos. old, and 5 Pigs, 7 weeks; 2 boar Pigs, 7 mos.; 1 Sow do. 7 mos.; 1 half breed Boar and 3 do. Barrows, all 7 mos.; 1 half breed Sow, 20 mos. with 11 pigs, 3 weeks; and 1 Sow, 32 mos.—Edw. N. Trimble, Balt. co. a Boar, 7 mos. and Sow, 12 mos. half Chester and half Berkshire—Pearce Curll, 1 Boar, 18 mos.—Edw. Young, How-

and co. 1 Sow and 6 pigs, Dutchess and Chester, 6 Shoats, Chester and Delaware, 4 mos.—Sam'l L. Tucker, Balt. co. a Chester Boar and Sow, and a half Chester and China Sow, 1 yr. with 3 shoats 3 mos. old—Wm. B. Dobbin, a Russian and Chester Boar, 3 yrs. and 2 mos.—G. Y. Worthington, Delaware white Sow, 2 years, and pigs; Russian and Chester Sow, 7 mos.; Berkshire and Chester Sow, 7 mos.; 6 sow Shoats, Del. and Rus. 5 mos.; 4 boar shoats, do. do.; 1 small bone Sow, 2½ years old, and 5 shoats, small bone and Russia breed, 7 mos.—Jno. T. Cramer, Frederick, a Chester Barrow, 1400 lbs. 4 years—Tho. Beeman, Harford co. a Chester Boar, 21 months—Sinclair & Co. Balt. a Chester Boar and Sow, 1 yr.—Benj. Hood, Chester co. Pa. 5 Chester Pigs, 2 mos. and 2 do. 6 weeks old—S. T. C. Brown, 6 Chester Pigs, 4 months; 1 Chester Sow, 3 yrs.; 2 Berkshire Sows and 1 Boar, 6 mos.—Jas. T. Earle, a Sow, 2 yrs. cross of Chester—Clement Warns, Howard co. 1 Chester Boar and 1 Sow, 13 mos.; 4 Pigs, 2½ mos.; 6 Shoats, 3 mos.; 1 Boar, 12 mos.; 3 pigs, 6 weeks; 1 sow and pigs, 2 yrs.; 4 Rus. and Ches. sow and pigs, 2 yrs.

Dutchess—Jno. Wilkinson, of Germantown, Pa. 1 Sow, 3 mos.; 1 do. 4 do.; 1 do. 6 do.; 1 do. 30 mos. and 1 do. 4½ mos.; 1 Boar, 7 mos.; 1 do. 13 do.; 1 pr. Pigs, 3½ mos. and 1 pr. do. 2 mos.—J. N. Goldsborough, large breed Dutchess Boar, 13 months.

China—G. W. Lurman, 2 China Sows, with litters of pigs—W. B. Dobbin, a China Boar and Sow—Wm. Jessop, 2 China Pigs, 8 mos. old.

Berkshire ond Crosses—J. M. Turner, 1 Berkshire Boar, 15 mos. old—R. Sinclair, half bred Berkshire Sow.

Lancashire—G. W. Lurman, 1 boar Pig, 6 mos. old.

Leicester and Russian—Sinclair & Co. 1 Leicester Sow, 15 mos. with 4 pigs, 3 weeks old; and 1 Russian Boar, 2 years old.

Westphalia—G. W. Lurman, 1 Westphalia sow Pig, imported, 6 mos. old.

Horses.

By J. C. White, of H., Balt. co. one Mare—Sol. B. Davis, of Balt. bay horse Archy Tom, for saddle—Sam'l G. Scarff, of Harford co. a Horse for light draught—Chas. Warren, of Athens co. Ohio, Sam and Julia, twins, Canadian breed, 3 years—Geo. S. Brown, Balt. co. Gipsey, out of Linton by Cippius, 3 years—L. Tiernan Brien, Kitty Hays, brood mare for saddle, 6 yrs. and Alice, a 2-year old filly—Jno. Merryman, jr. Young Goliah, 3 yrs; Bessie Bliss, 2½ yrs.; a bay Stallion, 2 to 3 years, and a sorrel Mare, 8 yrs. both for heavy draught—F. S. Key, Balt. co. a 3 yr. old Colt—Jno. Glenn, of Balt. black colt Jenny Lind, 2 to 3 yrs.—Wm. Richardson, of Frederick, Fanny Howard, a half breed, 12 yrs.; Kossuth, 1 yr. and a bay mare colt, 5 mos.—Walter Clements, of Howard co., Billy, a ⅛ breed gelding—G. W. Lurman, bay filly Dart, 4 yrs.; and bay filly Simple, 3 yrs.—Jas. N. Goldsborough, Lucy Neal, brood mare for saddle, 5 yrs.—Jeremiah Yellott, for S. Jenkins, 2 year old colt Parker—Dr. J. Dimmitt, Balt. co. Varina, 7 years old, and colt; O'Connell, 4 yrs.; and Eliza, 8 yrs.—Jno. A. Langdon, Cecil co. Lion, 5 yrs.—Ch. C. Grgle, Balt. city, Lucy, 6 yrs.—G. Y. Worthington, Scippus, 4 years—Clement Warns, a Colt, 24 mos.—Jno. Dunlop, Balt. co. 1 pr. Ponies, 5 yrs.; and a brood Mare, 4 yrs.—Peter Zell, a 7 year old Horse—A. W. Bradford, Balt. co. a 5 year old Canadian horse—Wm. Bankhead, Balt. city, 1 pair Mares, Morgan breed, 7 years; and 1 pair Horses, Messenger stock, 8 years—Jno. Williams, of Vermont, Morgan horse Whitehall, 6 yrs.—Sam'l C. Owings, Balt. co. bay mare Lightfoot, 5 yrs.; and a grey horse of Grey Eagle breed, 5 years—O. Bowie, grey mare Princess, 11 years; and a black filly, 6 mos.—Geo. Hoke, Balt. city, a team of 6 horses, various ages, for draught—Dr. Ed. Galt, Balt. co. Shepperd Lion, 5 yrs., Canadian—A. H. Groff, Balt. co. Kentucky Messenger, 5 years—R. W. Waters, Montgomery co. a Messenger colt, 3 yrs. and a Hyder Ally and Friendship, 5 yrs.—J. T. Sinn, of Frederick co. Exile, gelding, 8 years—Sam'l H. Benny, of Talbot co. Zack Taylor, ¾ blood, 4 yrs—H. Rodewald, of Balt. a pair English ponies, 9 and 10 yrs. Duke and Prince—N. Cromwell, of Fredk. co. Logan, of Hyder Ally breed, 3 yrs—M. L. Beckinbaugh, of Fredk. co. Gregory, 6 yrs. of Gregory breed—G. S. Holliday, of Kent co. Uncle Sam, 3 year old colt—B. C. Wickes, of Kent co. a thorough bred bay, 5 yrs—A. B. Davis, Canadian poney Michigan, 7 yrs.—Z. G. Harris, of Montgomery, Gen. Scott, 3½ yrs., of Icebreaker and Hyder Ally breed—J. R. Emory, of Queen Anne's co. a pair match Ponies, Jim and Sam, 3 and 6 years—Jas. Tilghman, of Q. Anne's, filly Flirt, 1 yr.—J. T. Earle, of Q. Anne's, 2 year old colt Telegraph—W. P. Howser, of Fredk., Sam Bell, 4 years; Rose Dorsey, filly, 3 yrs. by Walden Messenger; and Jenny Nettletop, 3 years, by Red Buck—Jas. P. Hutchinson, of Cecil co. Celum, 6 yrs.—Sam'l G. Scarff, Harford co. Daniel Star, 3 years, sired by Sir Charles—Rd. L. Nichols, Kent co. mare Agnes Star, 5 yrs.—Jno. Ridgely, of H., a pair of match horses, Ned and Sam, 8 years, and saddle horse Boston, 9 years—Ch. Ridgely, of H., Balt. co. filly Meta, 3 years—Jno. C. White of H. Balt. co. a saddle mare with foal by White Hall, 8 yrs.—Isaac Gilbert, of Carroll co. 2 year old colt John—Jno. Greacen, Balt. city, horse Trouble, 8 yrs. of Tom breed—Caleb Ogborn, of Fredk. co. colt Messenger, 18 mos.—C. C. Brown, Howard co. mare Nell, 4 yrs. and 3 year old colt Kitty Clover, by Tom—R. Thomas, Talbot co. mare Fanny, 6 yrs. Roanoke breed—A. F. Murdook, jr., mare Alice, 6 yrs. by Sir Charles—Ross Winans, of Balt. Shetland poney Robena, 4 years—Hy. Shirk, of Balt. native horse Jim, 6 yrs.—Hugh E. Spencer, of Harford co. 3 year old colt Barney Revenge, ¾ blood—Henry Devries, of Carroll co. mare Fly, 9 yrs. and Filley, 6 mos.—W. H. Marriott, of Anne Arundel co. colt Lady Isabel, 2½ yrs.—H. W. D. Waters, Fredk. co. horse George, 12 years—Jno. W. Stewart, horse Boyce, 12 yrs.—Jas. E. Crane, of St. Mary's co. Young Priam Antribus, by Priam, imp., dam Emigrant—J. M. Turner, horse Roderick, 11 yrs.—S. T. C. Brown, horse T. R. S. thorough bred and Canadian, 5 years—Cornelius Carey, Balt. co. Tom Jackscrew, 3 yrs.—Dr. A. H. Tyson, Balt. co. brood mare Beck, for quick draught, Eclipse and Mambrino breed; filley Nanny, 3 yrs. by Argonaut Chief; colt Nelson, 3 yrs; and Canadian saddle horse Pilson, 4 yrs.—W. G. Glenn, Balt. city, brood mares Lady Washington, 11 yrs. and Norma, 7 years—Wm. Gilmore, Balt. city, filly Black Bess, raised in Vermont, by Morgan Black Hawk, out of a part Morgan mare—Chas. Carroll, Howard co. Black Hawk, Morgan breed for quick draught, 5 years—Ch. Carroll, jr. Howard co. Tamerlane, 3 years—Chas. Carroll, Sally Walker, 6 yrs. and her colt Zampa, by Black

Hawk; Pigeon, 10 yrs. and her colt Red Jacket, 5 mos. by Black Hawk; Sultana, 10 yrs. and her colt Wanata, 7 mos., by Black Hawk; Kitty, 9 years, and her colt Amata, 6 mos., by Black Hawk—J. H. M'Henry, of Balt. Knickerbocker, 6 yrs., Canadian and Membrino stock—Franklin Felton, of Vermont, Black Hawk, jr. 6 mos.—Wm. M'Donald, Balt. one pair light draught horses, Frank and Felix, thorough bred, 6 yrs—Allen Dodge, Washington co. thorough bred Arabian horse Imaum, 14 yrs.—Dr. Murray, A. A. co. Oscar, 4 yrs. by Messenger; and Lady Morgan, 5 years—J. W. Ware, thorough bred 2 year old Stallion—Dr. Cheston, of A. A. co. a 3 yr. old Colt—W. Johnson, Balt. city, mare Black Peg, for single harness—Wm. Barrenger, Balt. county, 2 year old colt Tom Hyer—R. Meacham, Balt. city, black horse Frank, 6 years, Eclipse breed—Wm. T. Walters & Co. Balt. city, iron grey horse Lion, between 5 and 6 yrs.—R. J. Denny, Talbot co. dark bay horse Luath, 9 years—Sam'l Gillespie, Cecil co. Canadian stallions Metridge and Gossich, 6 yrs—Robt. G. Ware, Balt. co. full blooded Horse for saddle or harness—Franklin Felton, of Vermont, bay horse Robbin, 5 yrs.; bay mare Lady Moscow, 6 yrs. and chesnut horse Morgan Chief, 5 yrs.—Dr. Prentiss, Balt. co. chesnut sorrel Mare for saddle, 4 yrs.

JACKS AND JENNIES.

By Tho. H. Willis, Charlestown, Va. a Jack and Jenny—G. Y. Worthington, 1 pr. Mules, 4½ yrs.; 1 dun Mule, 4½ yrs.; and 1 mule colt, 4 mos. by a Spanish Jack—Hy. Carroll, Balt. co. a team of 6 Mules—Wm. Dorbacker, Balt. co. a pr. dun Mules, 4 yrs.—Hy. Crowl, Balt. co. 2 Mules, Sterling and Prince, 2½ yrs.—Jas. T. Earle, of Queen Anne's, 1 pair Mules, 1 yr.—Evan Davis, Balt. co. 1 Jack, Barnum, black, 3 years.

[*To be concluded in our next.*]

For the American Farmer.

VALUE OF PHOSPHATES IN AGRICULTURE.

In an article in the last number of the Farmer, I endeavored to show the value of the PHOSPHATES as effective and permanent invigorators of the soil, and the most reliable agents for restoring those elements abstracted by successive crops, and for keeping the ground in a state the most favorable for continued and abundant production. There are some other considerations connected with the subject, which are worthy the attention of the agriculturist.

That *phosphates* exist in large quantities in all plants, and especially in the cereal grains, has been repeatedly shown. As the food by which the human body grows must contain the elements necessary for the formation of muscular fibre, bone, &c. so the sap by which the plant is nourished, must contain the elements essential for its nutrition, and especially the *phosphates*; and, as in the former, if the supply of solid and liquid nourishment is exhausted, the body droops and decays, so, in the latter, if the soil, which is the great reservoir of nutritive elements for plants is scantily supplied, the plant must suffer a corresponding deterioration. Poorly manured lands, therefore, produce feeble and stinted specimens of vegetation, while well fed or well manured lands are overspread with luxuriant harvests.

That the plant, then, draws from the soil, by processes the precise nature of which cannot yet be fully explained, is indisputable; and the fact is none the less available for purposes of improvement in agriculture, although we cannot explain the precise mode by which assimilation is carried on. The digestive process does take place, and it must be the judicious farmer's care to supply the proper food. Take now a crop of grass or of cereal grains, and see how important it is, in various points of view, that they should be liberally supplied with PHOSPHATES, and that too, in a form the best adapted for absorption and assimilation.

It is a well ascertained, as well as curious fact, that during the earlier period of growth, the *phosphates*, which form so large a portion of grasses and grains, are distributed through the leaf and stem; but gradually, as the seed developes and ripens, leave the succulent parts and become concentrated in the seed. It is also a corresponding fact, that the *phosphates* and the salts which accompany them are essential to the development of the animal economy, and that there is a proportion between the formation of bone, muscle, &c., and the supply of these important elements. He, then, who wishes to have the best *grazing* grounds, where he can present the richest and most nutritious herbage to his cattle, will keep his ground well supplied or manured with a guano that abounds in *phosphates*;—knowing that it will supply the needed nutriment to the grass, and the grass to the cattle; and thus his stock will be kept in a high condition and full flesh, either for the farm or the market.

Again; he who raises wheat, corn, or other grains, has an equal inducement to look to it that his manures are abundantly impregnated with these essential elements. The *phosphates*, which, when distributed in the leaves and stem are so available to the raiser of stock, become equally so to the producer of grain; because they, as the plant ripens, become concentrated in the seed; and the size, richness, and nutritious qualities of the grain depend largely on the presence of the *phosphates*. Whether a farmer raise grain for his own consumption, to feed cattle, or for sale, therefore, he has a vital interest in this matter, and should see that he obtains what will best suit his purpose. So well convinced are the most intelligent English farmers on this point, that substances containing only *ten per cent of phosphate of lime*, such as fossil remains, &c. are equally sought after, dissolved in sulphuric acid and water, and sprinkled on the soil. Bone dust also is used, and to a certain extent is available, because one of the principal constituents of bones, is *phosphate* of lime.

But the article in which the PHOSPHATES are the most conveniently, because the most minutely distributed, is *guano;* and this, when judiciously used, must find favor, while it can be obtained. That which contains *the largest proportion of phosphates*, other things being equal, is decidedly preferable, especially for lands deficient in these salts, so that the farmer, in making his selection, will do well to look at the analysis, with a view to this particular point. The Peruvian Guano contains about *thirty per cent of phosphates*, with a large proportion of ammonia, which latter element is valuable chiefly for its stimulating properties, but may burn the crop or exhaust the soil;—the Mexican guano contains about *sixty per cent of the phosphates*, and a moderate proportion of ammoniacal salts. Probably the most judicious course for the agriculturist would be, to mix the two, and thus unite in his manure the advantages to be gained from the rich nutritive elements of the one, and the stimulating properties of the other.

S. F. S.

LIME AND SALT MIXTURE—IMPROVEMENT OF POOR LAND.

AMELIA, Nov. 13th, 1851.

To the Editor of the American Farmer—

DEAR SIR:—I have recently seen in the Farmer, salt, or salt and lime in combination, recommended as a manure for an oat crop.

Will you please say what quantity of salt alone, or salt and lime combined, will be sufficient for an acre from which I might expect a good crop from poor land?

Will you also say what you think of the artificial guano now advertised for sale in your city, and also that which has been recommended by Dr. Valentine? AGRICOLA.

REPLY BY THE EDITOR OF THE AMERICAN FARMER.

The article to which our correspondent refers, gave the preference to slaking lime with brine, or by admixing lime and salt together, and letting it slake in the heap, by the operation of *time*, to any other process. When thus prepared, the good effects of the lime are experienced the first year; whereas, under the ordinary processes of slaking, its benefits are not strikingly observable until the second and subsequent years. That this prompter action should take place, must be obvious to every thinking mind, as besides lime *proper*, soda and chlorine are also applied to the land; the two latter substances being found in the salt, and each being necessary constituents of nearly all cultivated plants. Let us take, for instance, the analysis of the ash of the *grain*, and *straw of wheat*, by *Sprengel*. He found that 1000 lbs. of wheat leave 11.77 lbs. and that the same number of pounds of wheat straw, left 35.18 lbs. of ash, consisting of

	Grain of wheat.	Straw of wheat.
Potash	2.25	0.20
Soda	2.40	0.29
Lime	0.96	2.40
Magnesia	0.90	0.32
Alumina, with a trace of iron	0.26	0.90
Silica	4.00	28.70
Sulphuric acid	0.50	0.37
Phosphoric acid	0.40	1.70
Chlorine	0.10	0.30

In Clover, and the Grasses, the proportions of Lime, Soda, and Chlorine, are still greater. Let us take Rye Grass and Red Clover as an example. In the *first*, the ash of the former has in it of *Lime* 7.34, Soda 3.94, Chlorine 0.6; in the latter 27.84 Lime, 5.29 Soda, and 3.62 per cent. of Chlorine. The supposition is, that any land requiring lime, stands in need, also, of soda and chlorine, as the latter substances are more apt than the former to become exhausted by leaching, and other mediums of abstraction. Looking then, in a common-sense light at the thing—disconnected from any mere chemical effects—it will strike the observing farmer, that, as each of these salts are found in plants, and subject to waste, occasional applications are necessary, and must be productive of good, as sources of supply. But to our mind "*poor land*" will require nutritive manures, as well as lime and salt, to ensure "a good crop," as plants require *organic* as well as *inorganic* food, to support their vigorous growth and prolific yield. The *salt and lime mixture*, we apprehend, can only perform certain specific offices—these they perform well:—for instance, the admixture of the former with the latter, greatly accelerates the action of that latter, and anticipates its benefits fully a year; but the insurance of good crops, involve a much greater diversity of food than any one or two minerals can afford; unless as in cases where the soil may abound with organic remains, in such a state as to be insoluble under the ordinary influences of culture. If the percentage of such substances be large, the application of salt and lime, would produce a decomposing movement, and thus convert what theretofore may not have been so, into the active food of plants; so that, though not nutritive in themselves, they are competent to provide such matters, by contact, the power of presence, and chemical convertion; thus, by indirection, producing a direct and positive effect of the most salutary character. If, however, the soil should be barren of these insoluble organic matters—of mould—these services, for want of the materials to act upon, cannot be expected to be performed, and then, in that case, the benefits to be expected are only such as attach to salt and lime as forming, in themselves, portions of the food of plants.

We shall now consider the question as stated by our correspondent:—

"What quantity of salt alone, or salt and lime combined, will be sufficient for an acre from which I might expect a good crop from poor land?"

In the absence of an *analysis* of our correspondent's land—in the absence of all knowledge of its local situation—in the absence of any information as to the system of culture to which his land may have been subjected—it is impossible for us to determine, or even conjecture, whether it needs either lime or salt. But in the absence of these lights, we may suggest; that, if his land has been long subjected to an exhausting system of culture, and not carefully fed with manures, the probability is, that it requires doses of both these minerals, and that it would, also, be benefited by an application of ashes, to resupply the waste of potash, the phosphates and other *inorganic* substances, needed by the wants of plants. Taking his representation of his soil into the account, viz: that it is "*poor land*," it is safe to presume, that it does require both lime and salt, and if we be correct in this presumption, we would not recommend the application of more than 14 bushels of lime, and 7 of salt, per acre, as a *first* dressing, to be increased, after he had, by a judicious rotation of crops, in which clover, or grasses, or both, had formed an important part of his system. We hold it as an agricultural maxim which none can gainsay, that no soil can be permanently fertile or productive, unless care be observed to maintain a healthful portion of organic matter—mould—in its body. Special manures of a highly concentrated nature, possessing abundant supplies of nutrition, may, and do, produce fruitful crops for a year or two, but their effects will prove of comparatively brief duration, unless they are followed by crops of clover, grass, peas, or some other kindred crop, to be turned in, to keep up a continuous supply of nutritive food in the earth.

Even in the poorest land susceptible of cultivation, there are large portions of *inert*, or what is termed, *organic* matters, which under the ordinary processes of nature, yield no supply of food to growing crops, but which, on applications of lime, or other alkaline bodies, are predisposed to decay, and, in their rottenness, to offer up food for growing crops, but unless other supplies of organic matters be provided, to be acted upon by the alkaline

bodies applied, when the supply which was in the soil at the time of such applications, may be used up, the nourishment of plants will cease, and the land be poorer than at first, because of the abstraction of the inert organic matters, to which we have alluded, by the crops grown thereon.

Although the beneficial effects of lime have been experienced for centuries, we often here farmers at the present day, doubt the efficacy of its use—some declaring, that, though it makes soils which had been worn-out—as the phrase is—give better crops for a year or two—it makes them worse afterwards. This is one of the natural effects which an intelligent mind would look for, in every case where no attention may be paid to applying organic manures. Lime, ashes, soda, and kindred bodies, though they enter into the structures of plants, as food, form only portions of what is essential to build up such structures, and if those other portions be not in the soil, a failure in the crops must be the inevitable consequence. If we apply lime to a soil that had been reduced by long and improvident culture, it will seize upon all inert matters, *excite* them by contact, presence, and the corrosiveness of its nature, into decomposition, and prepare them for the food of plants. But when this supply of inert matter is all worked up by the lime, its office, in this connection, ceases; for it has nothing more in the soil to act upon, and hence the soil becomes worse than it was before its application. This condition, however, is *not* the *fault* of the lime, but the necessary consequence of its *virtues*. It had, as it were, cooked up all the materials it found in the soil into nourishing food for the crops; but as the improvident, heedless, owner of that soil, had *omitted* to provide more materials, it had been deprived of the means of carrying on one of the most essential branches of its occupation. Certainly then, in all such cases, it *is* the owner of the land, and *not the lime*, that is to blame; the former has failed in his duty, while the latter obeying the laws of nature has fulfilled those laws not only to the very letter, but in the fulness of their spirit also. Farther than this, lime cannot go—farther than this, it should not be expected to go.

"*Poor land*," is a very indefinite term—for it may be poor clay—poor sand—poor gravel, or poor loam; for either the one or the other may be reduced to a state of infertility by injudicious culture: and, therefore, it would seem to savor of empiricism for us, in the absence of every other light, to *prescribe* such a remedy as would ensure good crops. But this we would advise our correspondent,—not to rely upon the lime and salt mixture, *alone*, to produce such results; for if the other description of food be not present in his soil, he may, and doubtless will, fail in producing the desired effect. Better will it be for him, to apply with it, in conjunction, a liberal dose of organic manures; in which case, he will not fail to secure to himself good crops both in the present and in the future, if he should pursue the course of subsequent treatment indicated by our preceding remarks—that is, if he should keep up a stock of raw material in his land, to be wrought up into the food of plants by the alkaline substances that he may apply.

1. If he has at hand *river-mud*, *creek-mud*, *marsh-mud*, *woods-mould*, *leaves*, or any other kindred substances, let him compost them with one-third their quantity of stable or barn-yard manure, this winter, and in the spring, when it may be time to prepare his land for his crops, shovel the mass over, and spread over every acre of his land, twenty double-horse cart loads of such compost; plough it in, then harrow, and apply his lime and salt mixture, harrow that in, and we think we can promise him good crops.

If his supply of stable and barn-yard manure is not sufficient, he may substitute ashes for it, in the proportion of 5 bushels for every load of the materials named above.

2. If he has not the materials we have enumerated, to form the compost recommended, then his next best plan will be, to give his land, if intended for corn, a dressing of 400 lbs. of guano, mixed with 100 lbs. of plaster, per acre, which should be evenly spread over his land soon after being mixed, and promptly ploughed in, care being taken to mash any lumps in the guano, with the back of his spade, or shovel, in order that the distribution of the mixture may be equal: and we believe he may *moisten* the guano with decided advantage as to its effects on his land, as well as comfort to his hands, who may be engaged in sowing it. His guano being ploughed in, he should then harrow his land, and apply the salt and lime mixture, as above recommended.

If the crop be *Oats*, one-half the quantities of guano and plaster will be enough.

3. Six bushels of bone-dust, per acre, dissolved in 100 lbs. of Sulphuric acid, mixed with 6 bushels of ashes, will answer instead of the guano and plaster: Or he may make a compost in the following manner; the proportions being intended for an acre of land: 6 bushels of bone-dust, 6 bushels of ashes, and 1 load of woods-mould, or either of the substances named in No. 1, to be placed layer and layer about, shoveled over, and suffered to lie in heap until needed for use; then to be reshoveled over, when it will be ready to be applied as a top-dressing and harrowed in.

Be the application of manure what it may, it will be the part of wisdom to seed to clover or grass, as the means of furnishing a future supply of vegetable food. On his *corn*, he may either sow clover or grass seeds, or both, or sow peas through his corn at the last working. If he should contemplate this plan, it will be necessary to use the Cultivator in cultivating his corn, in order that the surface may be flat—the clover or grass seed to be harrowed in, and the field be treated to a bushel of plaster per acre.

Should he sow clover seed, or Clover and grass seeds on his Oats, we would let the oats come up, and be 2 or 3 inches high, before we sowed the clover or grass seeds, which, after being sowed, should be treated to a bushel of plaster per acre, and *rolled* in.

Our correspondent need not apprehend any danger of driving off the ammonia of his organic manures, by applying the lime and salt mixture, as a top-dressing, as the muriatic acid of the salt will, we believe, neutralize the corrosive effect of the lime. At all events, the plaster, in union with the guano, will hold fast the ammonia of the latter until called for by the plants.

We have conscientiously replied to the inquiry of our Correspondent, and trust he may not be deterred, by any considerations of expense, from testing the efficacy of our prescriptions, as we feel certain that every acre he may improve in the way we have pointed out will be quadrupled in its productive capacity, thereby not only paying for the manure, but being in a condition to be kept in an improving state.

For the American Farmer.

The following paragraph went the rounds of the papers perhaps a year ago, and seems now to be making another tour:

"*Pickling Meat.*—Prof. Rafinesque denounces the use of saltpetre in brine intended for the preservation of flesh to be kept for food. That part of the saltpetre which is absorbed by the meat, he says, is nitric acid or aquafortis, a deadly poison. Animal flesh, previous to the addition of pickle, consists of gelatinous and fibrous substances, the former only possessing a nutritious virtue; the gelatine is destroyed by the chemical action of salt and saltpetre, and, as the profes sor remarks, the meat becomes as different a substance from what it should be, as leather is from the raw hide before it is subjected to the process of tanning. He ascribed to the pernicious effects of the chemical change all the diseases which are common to mariners and others who subsist principally upon salt meat—such as scurvy, sore gums, decayed teeth, ulcers, &c., and advises a total abandonment of the use of saltpetre, in the making of pickle for beef, pork, &c., the best substitute for which is, he says, sugar, a small quantity rendering the meat sweeter, more wholesome, and equally as durable."

It is not to be expected that housekeepers accustomed to prepare the fine juicy hams for which Maryland and Virginia have long been celebrated, will relinquish the use of a material that the experience of many generations has taught them is essential to the production of good bacon. As it is possible however, that the erroneous idea of swallowing "a deadly poison," might create uneasiness with some, and perhaps lessen the proportion of our good hams, I propose to show that the views of the writer are inconsistent with the present state of chemical knowledge, and are contradicted by ample experience.

The extract informs us, that the part of the saltpetre absorbed, is nitric acid or aquafortis, "a deadly poison." I shall attempt to show that the saltpetre is not decomposed at the surface of the meat, as might be inferred from the above, and the nitric acid only absorbed. The saltpetre is taken up by the meat, without at least immediate decomposition, because every chemist knows that when nitric acid is separated from potash and other basic salts, it is instantly decomposed upon being applied to meat; its oxygen uniting with part of the elements of the meat, whilst the nitrogen escapes in a gaseous form. If the quantity of nitric acid be sufficient, the muscular fibre is changed into a fatty matter, instead of being hardened or tanned as we are told above, and it assumes a yellowish color. And experience teaches us, that the greater the proportion of saltpetre, up to reasonable limits, the more perfect is the red color of the meat.

Saltpetre is composed of nitric acid 53½ per ct.; Potash 46½ per ct., and is therefore properly named nitrate of Potash.

Common salt, when dissolved in water, consists of muriatic acid, and soda; the muriatic acid alone, is also "a deadly poison," and yet who has ever been poisoned by the *proper* use of either salt or saltpetre.

Potash and soda uncombined are also poisons, and in fact, there is no article, even of food, that will not prove poisonous in some quantity or other.

Why not sound an alarm upon the ground that the muriatic acid of common salt, "a deadly poison," is the only part absorbed by meat? There is as much reason to say that this acid is absorbed, as in the case of the nitric acid of the saltpetre.

To discuss fully the theory of the action of alkaline neutral salts upon animal matters, would greatly exceed the limits proposed for this article. Liebig thinks they prevent or retard putrefaction by merely abstracting the water, which constitutes about three-fourths the weight of flesh. Be that as it may, it is well known that this class of salts are absorbed entire, and the greater portion of them pass out again, with the water of the meat.

There is however some ground for supposing that a decomposition of the little remaining saltpetre, slowly goes on; if so, the liberated nitric acid, is instantly decomposed as before stated, and becomes altogether harmless. The potash, with which it was united, has probably some agency in giving the desired red color to meat, if it be true, as many of our experienced housewives aver, that a similar effect is produced by the use of ashes, especially those from hickory wood.

We are told in the extract, that meat consists of "gelatinous and fibrous substances;" and that the former, the only nutritive portion, is destroyed by the action of salt and saltpetre. If this be a fact, there would be no nutritive matter left in salted meats!

The composition of the flesh of beef, excluding fat, is

	water.	fibrine.	Gelatine.	Nutriment.
	74	20	6	26
The flesh of Pork contains	76	19	5	24

If the only nutritive matter were gelatine, it would require more than 3 lbs. of fresh meat to equal 1 lb. of wheat flour, and yet experience shows, that a pound of meat will sustain man longer than a pound of wheat flower. Besides, chemistry informs us, that fibrine and gelatine are about equally nutritive, because their composition is almost identical.

As to the scurvy and other diseases being produced solely by the chemical action of salt and saltpetre, on meats eaten by mariners and others, it is well known that it requires a combination of causes to create scurvy. A navy surgeon will inform us, that in latter times, scurvy rarely occurs, if due regard be paid to cleanliness and exercise, as well as to the *quality* of the articles of diet, provided there be ample supplies of sauerkraut, pickles and vegetable substances that make up the seaman's rations in the present day.

Good health cannot be enjoyed by human beings living on ship-bread and salted meat only, and when cleanliness and exercise are not attended to, especially, if as is sometimes the case, the meat and bread are unsound. Nor could they be healthy under similar circumstances, if the salt meat were replaced by that from the butcher.

The concluding advice of M. Rafinesque in reference to the utility of sugar, may be safely followed, and if he had contented himself with urging the use of sugar in large proportions, there would have been no need for these strictures. The superiority of the hams of Maryland and Virginia, may be attributed in a great measure to the practice of applying less salt and more saltpetre and sugar, than is usual in most other regions, and also to shortening the duration of salting. The meat is more tender and juicy than where common salt alone is applied.

If further proof were needed of the erroneous views of Mr. Rafinesque, it may be found in what is called in Va. "a jellied ham," made by taking a properly cured ham, which after being well trimmed and cleaned is *tightly* wrapped in a thick cloth and boiled during 12 hours; when cold it is unwrapped and found to be almost a *jelly*, giving

ample proof that its nutritious matters have not suffered by either salt or saltpetre.

I have not had occasion to investigate the effects upon old salted pork treated in a similar way, but an experienced seaman once informed me, that by long boiling, it becomes as *tender as fresh meat*; the salt being almost wholly dissolved out if the water be several times changed.

A series of experiments upon this subject, in connection with the requisite chemical analyses, could not but prove alike interesting and useful to our people, both afloat and ashore, and terminate crude speculations. PHILIP T. TYSON.

Baltimore Co., Dec. 2, 1851.

FLORAL DEPARTMENT.

Supplied by John Feast, Florist, 279 Lexington st. for the American Farmer.

The past month has been one of uncommon severity, and it required the greatest care to protect even exotics in the house from freezing, which is uncommon so early in the season. Operations out of doors are entirely closed, consequently our attention will be confined to the house, in which a florist can always find enough to do, in making preparations for the coming spring, if industriously inclined, in making labels, rods, sticks, fixing the frames and sashes for seeds to be sown through the spring, having leaves collected, and manure prepared for hot-beds, if needed, which might be put down at suitable times in succession. All plants in the house will require the same attention in keeping clean; re-pot such as require larger pots, as Primroses, Mignonette, Schizanthus, Gilliflowers, &c. and many of those that are intended for early flowering, having been raised from seed, will require frequent shifting before they are in a state for flowering.

Gesnerias, Glozinias, Achemenes, &c.—Some few may be potted for an early bloom in a mixture of peat and leaf mould, equal parts; give plenty of drainage. *Japan Lillies* re-pot, if showing signs of growing—also, sow the seeds.

Azaleas will require to be watered more liberally, as they begin to grow.

Cinerarias put in larger pots, if fine plants are wanted for blooming.

Calceolaris remove, as required, in larger pots.

Fuchias may be cut down, and propagated for a young stock.

Heaths will begin to grow, and cuttings may be put in from this to April for a young stock. Sow different kinds of seed, as Pansy, Peturias, Phlox Drumondii, Verbenas, and such as are intended for planting out in the spring in the open ground, to flower early.

Now is a good time to take cuttings of *Evergreens*, to increase the stock. Keep them moderately cool; there will be better success, and not so liable to damp.

Oxalises, that have done flowering, place away to dry off, so that the bulbs may mature.

All the greenhouse bulbs, as *Sparaxis, Ixias, Babianas, Amyrillus*, and such as are nearly flowering, have in proper sized pots, and nearest to the light, and kept tolerably moist.

Geraniums will now begin to grow, and should be kept clean, put in larger pots, and kept as dwarf as possible, if fine specimens are wanted for flowering.

☞ FACTS ARE STUBBORN THINGS. ☜

The following facts need no comments from us, for they speak for themselves. They are from a gentleman of undoubted veracity, correct judgment, and sterling worth, whose word is entitled to as much credence as that of any man living.—Knowing ourself the result of his various experiments, which were made at our suggestion, and by our advice, we addressed a series of questions to him, and obtained from him, in detail, the following *practical*, and highly

INTERESTING EXPERIMENTS WITH PLASTER, PROVING ITS AFFINITY FOR AMMONIA.

To the Editor of the American Farmer—

DEAR SIR:—In answer to your questions, I beg leave to reply, as follows:—

1st. In the year 1845, I recollect your walking with me through the yard attached to the Workshops of the Maryland Penitentiary, and that on approaching the *drain* which carries off the contents of the *vaults* of the workshops, that the stench was almost insufferable, and that I remarked to you, that that part of our enclosure, had always been a source of great annoyance to all who came within the range of its noisome smell,—to which you replied, that it could be very easily remedied, and advised the daily strewing of plaster over the surface in warm weather, when fermentation was carried on actively. To test the efficacy of your suggested remedy, as our Messenger was just then prepared to go into town with the cart of the Institution, I despatched him to Mr. Frey's plaster mill, near by, for a barrel of *plaster;* directed one of the prisoners to apply a portion of it so soon as the Messenger arrived. He strewed enough on to whiten the surface, and after we had made the tour of the yard, and some of the workshops, which took us about half an hour, we revisited the drain, and found that it had been entirely cured of its offensive smell. It may be proper for me to add, that this drain was the receptacle of the solid and liquid voidings of the prisoners, while engaged at their work, as well as of the water used in washing their hands and faces; and was, therefore, always wet. Finding your remedy inexpensive, neat, and effective, I had it regularly applied during my wardenship, every summer; and always with the happiest effects, as that portion of the yard was thereby relieved of a most grievous nuisance!

2dly. At your recommendation, I recollect that I applied Plaster, in shallow vessels, at a point of the Avenue of the *Dormitory*, where, previously, there had always been a most offensive and sickening smell, arising from the breaths of the prisoners, which seemed to settle at that particular spot.—This was also *cured* through the agency of plaster. By changing the plaster, whenever it had absorbed as much of the mephitic gases as it could hold, I was enabled to control the offensive smell, which theretofore had prevailed.

3rdly. You advised me to introduce plaster into the Hospital, where, as in all other similar institutions, the air is always foul. I carried out your advice, and derived the most beneficial effects from it.

4thly. The manure piles of the institution, located in the North-western corner of the lot, which comprised the sweepings of the shops and yards, offals of almost every kind and description, coal ashes, hog-manure, and which, every morning, had poured over it, the contents of the prisoners' *night-*

buckets, had always previously been a fruitful source of nuisance, was entirely deprived of its offensive smell, and the surrounding air rendered perfectly sweet and pure by applying plaster, through your advice. It was my custom each morning, so soon as the buckets were emptied on the pile, to have the surface strewn over with plaster; on that, the sweepings of the shops and yards were placed. By this simple means, a nuisance which had existed from the creation of the institution, was entirely removed, and the manure piles, from previously being places where the most noxious smells were thrown out in warm weather, became as sound as any other part of the yard.

5thly. You ask, whether the manure made in those piles, thus treated, was sold, and what was the report of its efficacy? To this question, I answer, that it was sold to a gentleman, a resident of our city, who owned a farm a few miles distant. The reports which were received from his wagoner, from time to time, were to this effect,—that it acted most powerfully—on one occasion his remark was, that it acted like a charm, that you could almost see the corn grow where it was applied. But the question of its active virtues, was, in my mind, settled by the fact, that the same individual continued to purchase it for years, and had to haul it some three miles. As he is a gentleman of enlarged views, as well as an enlightened economist, it is not to be presumed, that he would have continued to purchase it, had he not found it a valuable manure, as the transportation was very expensive, to say nothing of the cost of the manure.

You are at liberty to make whatever use of this you may deem proper, and I pray you to accept the assurance of my esteem and respect, and believe me, Yrs. most truly, WM. JOHNSON,
Former Warden of the Maryland Penitentiary.

P. S. There is one place, not enumerated in your questions, where I used plaster, that I will mention. The hog-pens immediately adjoining the manure pits spoken of in the preceding part of this letter, had always been a source of great nuisance, but by the strewing of plaster over the floors, all the offensive smell was completely locked up, and gave no further annoyance. The pig-pens, manure pits, and main-drain leading from the workshops' vaults, had for years not only been *eye-sores*, but *nose-sores*, also, about the establishment, and I am happy in bearing testimony to the fact, that, by using plaster, under your advice, they were all perfectly sweetened, and that, it afterwards, gave me pleasure to take visiters to those places, to show the triumph of science over the most noisome odors to which the sense of smell was ever exposed.

W. J.

Horner's Prepared Animal Manure.

THE subscriber asks the attention of the farming community to the following analysis by Dr. Jas. Higgins, State Chemist, and comparison between his prepared Animal Manure, and Patagonian and Peruvian Guano. It is necessary for a full understanding of the comparison, to state, that his Compound costs but 35 cts. per bushel, or $12 per ton.—This preparation has been used with much success on the tobacco crop, and testimonials from Mr. Reynolds, Mr. R. H. Hare, Col. Bowie, and other well known planters and farmers, who have purchased it for Corn, Wheat, Tobacco, and spring crops generally, can be produced as to its efficiency, by practical tests.

For further particulars, see advertisement in another part of this paper. dec. 1 JOSHUA HORNER.

LEONARDTOWN, Oct. 7th, 1851.

To Mr. J. HORNER, Baltimore—*Dear Sir:*—Below I send you a statement of your Manure as to its essential valuable constituents, and the relation which it bears to Patagonian Guano. A ton of your manure contains of

Ammonia,	54 34-100	pounds
Phosphate of Lime,	528	do

The average of Patagonian Guano by the ton, as it is sold, contains of

Ammonia,	60	pounds
Phosphate of Lime,	800	do

Estimating Patagonian Guano and your Manure by the same rule as to the value of the several constituents, the Patagonian Guano would be worth $19.20 per ton, and your Manure $14.44. If Patagonian, therefore, be worth $38 per ton, your Manure is worth about $28.50 per ton.

THE VALUE OF PATAGONIAN GUANO AND YOUR MANURE, I DETERMINE BY THE AGGREGATE VALUE OF THEIR SEVERAL VALUABLE CONSTITUENTS, and *by the same rule* which would make Peruvian Guano worth $46 per ton. Your Manure also contains 122 pounds of Gypsum, 114 pounds of Salts of Potash and Soda, and 300 pounds of Lime to the ton, being about equal to Patagonian Guano, of average quality, in these constituents. Very truly yours, &c.,

JAMES HIGGINS, St. Ag. Chemist.

P. S.—You can make what use you please of this.

CHICKERING'S PIANOS.

THE Subscriber is *Sole Agent in Baltimore*, for the sale of CHICKERING'S CELEBRATED IRON FRAMED GRAND AND SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London.—Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possessing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, entrusted to the subscriber, either for Pianos, Music, or any article in his line of business, will be faithfully executed. F. D. BENTEEN,

jan1 6t* 181 Baltimore street.

GUANO---GUANO.

THE subscribers have now in store supplies of Peruvian and Patagonian GUANO, which they will sell in lots to suit at the very lowest market rates.

They are expecting further arrivals of Peruvian about 1st August, and also about 1st September, and are now prepared to contract with farmers for their fall supplies, deliverable from ship at those periods—thus saving the purchaser a heavy charge for transportation.

Ground PLASTER in barrels.
GROUND BONE, pure.
Clover and Timothy SEED.
KETTLEWELL'S RENOVATOR.
Reynolds' CORN SHELLERS.
FISH, BACON, TAR and SALT.

jy. 1 W. WHITELOCK & CO. cor. Gay and High sts.

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.——*GEORGE PAGE*, Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $85 to $200, and each simple, strong and powerful. His *Horse Power & Thrashing Machine*, he is prepared to supply at the low price of $125 complete; the Thrashing Machines, without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planters Portable Tobacco Press; Portable Grist Mills complete, $163

WILLIAM HARRIS, GUN, RIFLE AND PISTOL MANUFACTURER, No. 65 *South st.* Baltimore, Keeps constantly on hand a large assortment of Bird and Ducking Guns, (double and single barrelled.) *All Guns warranted to shoot correctly.* Also, Pistols of every style and finish, such as Revolvers, Self-cocking Rifle Barrel. Rifles of very superior quality at reduced prices. My stock comprises every article in the sportsman's line. Diamond grain Powder; Dupont's and Beatty's Powder; Revolving Pistol Percussion Caps; Military Percussion Caps, for muskets and U. S. pistols. Guns Stocked and Repairing done with neatness and despatch. Persons desiring to purchase any article in the above line, would do well to give me a call. sept. 1-6t

LIME—LIME.

THE undersigned having purchased of E. J. Cooper the most extensive Lime Burning Establishment in the State, is now prepared to supply Agricultural and Building LIME of superior quality, to farmers and others, on accommodating terms, from his Yard, at the *City Block*, or delivered at the several landings on the Chesapeake Bay and its tributaries, and pledges himself by strict attention and punctuality, and a determination to do justice, to merit a liberal share of patronage. Any orders addressed to him through the Baltimore Post Office, or left with C. W. BURGESS & Co., No. 60 South street, one door above Pratt, will be promptly attended to.

Feb. 1-1y* JAMES L. SUTTON.

Calystegia Pubescens—New Hardy Climber.

THE new and elegant climber, recently introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood in the grounds here for two winters without protection. Trained to a single pillar, say ten feet in height, it is a very striking and beautiful object from June till cold weather, during which time it is covered with a profusion of its large double flowers of a delicate rose color. It is very ornamental planted in patches like Verbenas; makes an admirable screen—and is very effective in young plantations, belts or shrubberies, trailing prettily on the surface, and running among the lower branches of the trees in a very picturesque manner. Its culture is very simple, and it will thrive in common garden soil. If required in considerable quantities, the tubers may be divided into single eyes, planting each in a four inch pot of good light compost, in February, under glass, or in hot beds in the spring; or large pieces containing several eyes may be planted in the open ground in May.—Plants, $3 per dozen. Tubers for 100 plants, $3, which may be sent by mail or express, to order.

Also every description of Fruit and ornamental Trees and Shrubs, Strawberries, Dahlias, Roses, Verbenas, Chrysanthemums, &c., *with every new variety of the present season* Stocks for Nurserymen and Amateurs, both Fruit and ornamental, of every description. *Pear Seed* of first rate quality.

Address B. M. WATSON, Plymouth, Mass.

Carriage paid to Boston.—Catalogues sent post paid, on application. Oct. 1-5t

ANDRE LEROY,
Nurseryman, at Angers, France,

RETURNS his thanks for past favors, and begs leave to inform his friends and the public in general that his catalogue for 1851 is now ready, and will be had on application to his agent, Mr. E. BOSSANGE, 138 Pearl street, New York. He offers for sale a large collection of the finest Fruit, Forest and Ornamental TREES of all kinds, SHRUBS, ROSES, &c. The superior quality of his Trees is already well known in the United States, and the experience he has of packing up Trees to be sent abroad, gives him a noted advantage over all other Nurserymen. Orders had better be sent early, as although his Nursery is the largest in France, the number of some new kinds of trees are limited, and some of the last orders sent last year, could not all be executed. The terms, prices, charges and all desirable information will be found in his catalogue. The Trees will be shipped to the care of his agent, who will attend to the receiving and forwarding. For further particulars, and for the catalogue, apply to E. BOSSANGE,

nov. 1-3t 138 Pearl street, N. York, Agent.

All agricultural papers will please insert the above three times, and send the bill and a copy of each paper to E. BOSSANGE.

OSAGE ORANGE SEED—Saved with great care, and received direct from the region where it is grown, of reliable quality, for sale by L. S. HOYT,

Dec. 1-3t 55 Water street, New York.

Hussey's Reaping and Mowing Machine.

THE SUBSCRIBER will continue to manufacture his Machines as usual in Baltimore. Important improvements will be added this year. Its universal high character in this country has been confirmed by its late triumphant success in England.

The following is from the London Times, of Oct. 7th.

"A trial has taken place before the Cleveland Agricultural Society, of the respective merits of M'Cormick's and Hussey's American Reaping Machines, and the report of the Jury of practical men, appointed by the consent of both parties to decide the question of merit, is favorable to the latter Implement. This *decision throws considerable doubt upon the justice of the award of a Great Medal, at the Exhibition to M'Cormick's.*"

The Jury at Cleveland unanimously decided that Hussey's Machine cut the corn in the best manner, especially in the direction of the lean—that it caused the least waste—that it did the most work in a given time—that it left the cut corn in the best order for gathering and binding—that it was best adapted to ridge and furrow, and was the least liable to get out of order. It was subsequently tried at Windsor, in presence of Prince Albert, who ordered two machines, one for Windsor and one for Isle of Wight, a strong commentary on the premature award of the great medal by an Institution of which he was the head.

The following is Prince Albert's certificate.

WINDSOR CASTLE, Nov. 13, 1851.

Sir:—In answer to your letter addressed to Gen. Wemyss, I have received the commands of his Royal Highness Prince Albert, to say, that so far as he could judge of Mr. Hussey's Reaping Machine, from its performance in the high fern at Windsor Park, his Royal Highness is disposed to form a very favourable opinion of it, and has ordered one* in consequence for the use of his own farm. His Royal Highness can however give no opinion as to the relative merits of this machine in comparison with those of others which he has not seen at work. I have the honor to be sir, your ob't serv't,

GREY.

*The Prince ordered two Machines, one for Windsor and one for Isle of Wight.

The following is the language of one of the Jury who gave the Medal to M'Cormick. An English paper says—At the table at Barnard Castle, Mr. Thompson proposed the health of Mr. Hussey with great fervour, and spoke of the great disadvantages under which Mr. Hussey's Machine had labored when tried against M'Cormick's for the great exhibition Medal; Mr. Hussey not being in the country at that time, and no one being present who understood the adjusting and working of the implement. Mr. Thompson said he was now so thoroughly satisfied of its great merit, that he would do his best to get a medal for it.

Price of Mowing and Reaping Machines, -	$125
Price of Reaping Machine, - - - -	115
Price of Front Wheels, - - - -	20
Platforms for side delivery, - - - -	5

jan 1. 1t.

Important to Farmers and Machine Makers.

THE subscriber respectfully informs the public that he has lately completed a TRIPLE REACTING INTERNAL GEARED HORSE POWER, which outrivals any in use.—It is made entirely of Iron, both Frame and Gearing. The Journals are made of Cast-Steel—its weight is 600 lbs. On trial it has proved itself capable of performing from 50 to 100 per cent. more work than other Powers with the same labor of the team. It is warranted to hold 8 horses.

I have also completed a combined THRESHER AND CLEANER, which is capable of Threshing and Cleaning from 300 to 500 bushels of wheat per day, with from 6 to 8 Horses and an equal number of hands.—4 horses can thresh with it from 100 to 200 bushels per day of wheat, and 400 to 500 of oats. It is very convenient for those who follow Threshing, and for two or more farmers to own in company, it is more convenient to move than any machine in use. The Machine stands on the wagon while threshing—the Power is loaded on the same wagon in moving—two horses are sufficient to move it; it will save enough labor in threshing 2000 bushels to pay its extra cost. It will thresh in a field or by a stack as conveniently as in a barn. The cylinder and concave can readily be adjusted so as to thresh with equal facility both tough and dry grain.—it is free from the complication and liability to get out of order of other machines of the kind, and of less cost.

Machine makers supplied on the most reasonable terms. Powers made by wholesale by I. W. Groff, Lancaster, Pa.—Threshers, Machines, &c. made and for sale by Jeffrey Smedley, Columbia, Pa.

All orders directed to the subscriber at Lancaster, Pa., will be promptly attended to. SAMUEL PELTON, Jr.

Also for sale by E. Whitman, Jr. & Co., Baltimore. jy.1-1y

$50,000
AGRICULTURAL
IMPLEMENTS

WERE exhibited at the Maryland and Pennsylvania State Fairs held in October, 1851. These Fairs being open to competitors from all parts of the world, brought together the largest display of Farm Implements ever witnessed in this country, among which were to be seen Implements from all parts of the United States. After several days strict examination, the following awards were made, viz: The Maryland State Agricultural Society

AWARDED E. WHITMAN & CO.

For the best Plow,	$5 00
" " Farm Wagon,	8 00
" " Wagon Harness,	4 00
" " Horse Cart,	5 00
" " Cart Gear,	4 00
" " Cornsheller,	4 00
" " Corn and Cob Crusher,	5 00
" " Butter Churn,	4 00
" " Portable Smith's Forge,	6 00
" " Chain Pump,	2 00
" " Hay Press,	25 00
" " Hydraulic Ram,	3 00
" " Specimen of Drain Tile,	2 00
" " Hog Trough,	3 00
Premium in Plowing Match,	8 00
" " "	6 00
For the *Largest* and *Best Display* of Agricultural Implements, the Highest Prize of	30 00

Also a *Certificate of Pre-eminence* for their *Wrought Iron Rail-way Horse Power*, which is the highest honor the Society can bestow upon any implement.

The Pennsylvania State Agricultural Society

AWARDED E. WHITMAN & CO.

For the best Hay Press,	$20 00
" " Sweep Horse Power,	10 00
" " Reaping Machine, (McCormick's,)	10 00
For the Largest and Best Display of Agricultural Implements,	20 00
Also, for their superior Plough, a Diploma	
" " " Straw Cutter, a Diploma	

dec. 1

AGRICULTURAL IMPLEMENT DEPOT
And Produce Store,
No. 95 LIGHT STREET WHARF,

And in front of the small wharf where the Hugh Jenkins, Cambridge and other steamboats start from daily.

TO facilitate and render this business more convenient for his customers and himself, the subscriber has taken a convenient and commodious Warehouse in Baltimore, as a depot and sale place for all the various Agricultural Implements manufactured at his shops in Carroll County; also, to sell the products of his Farms, Mill and Foundry.

The following articles of his own manufacture and produce, he will endeavor constantly to have there for sale, viz:

HORSE { Endless Chain or Tread, for 1, 2 or 3 horses.
POWERS { Levers for 2, 4 or 6 horses.
THRESHERS { With Seperator and Fan attached. / With Seperator only. / Without Seperator.

Wheat Fans, Corn and Cob Crushers, Corn Shellers of various kinds, (very superior;) Cutters for Hay, Straw and Fodder, (Richardson's patent;) Cornstalk Cutter and Grinder, (a new and the best article now in use;) Horse Rakes; Smut and Garlic Rubbers, (which is unequalled for its simplicity of structure and thorough operation on Wheat or Buckwheat;) Clover Seed Hullers; Ploughs of several kinds, but only such as are known to do the best work; Harrows and Cultivators, and various smaller Implements for Garden and Field use.

Mumma's patent CONCAVE CYLINDER CORN SHELLERS, either for power or hand. It received at the late Fair in Balt. the first premium over all others. The peculiar structure of the Cylinder, allows it to take the end grains off the cob cleaner than any other machine, also separating the shelled corn and cobs. Also the Vertical Cylinder Corn Shellers, (all cast Iron and of great strength) which will shell 100 bushels per hour.

The subscriber would now respectfully call prompt attention to the securing for the ensuing harvest, (which promises to be very heavy) a Horse Power and Threshing Machine, either with or without Cleaner, which for *simplicity* of arrangement, *superior* structure and materials, and *cheapness* of price, have never been equalled in this market.

N. B. Address me in Baltimore, or at my residence, New Windsor, Carroll Co., Md. jy 1 JAS. C. ATLEE

C. H. DRURY, *Hollingsworth street corner of Pratt—Head of the Basin*—having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Beach Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn shellers with double hopper—Old Vertical and Virgima sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel

Bone Dust and Poudrette.

BY the request of my customers, I have made considerable improvement in the machinery for GRINDING BONE, and am now prepared to furnish a fine article, which acts quicker and more powerfully, as I extract no glue from the Bone, or use any Chemicals, leaving the Bone Dust in its natural or pure state, weighing from 55 to 60 lbs. per bushel. The *Poudrette* is as good as can be made, and will be sold low. Apply by letter, or at the Factory on Harris' Creek, Baltimore, Maryland. THOS. BAYNES.

REFERENCE.

D. M. Perine,	Lloyd Norris,	Wm. Baker Dorsey,
G. W. Lurman,	W. B. Stephenson,	W. H. Ross,
J. Q. Hughlett,	J. W. Randolph,	Capt. C. Wright,
J. Tyson, Jr.,	T. Jef. Rusk,	Wm. S. Bond.

N. B. Orders left with the Office of the Farmer will be attended to.

☞ In December and January, I will sell my Bone Dust at 50 cts. per bushel. Oct. 1.

F. B. DIDIER. T. TENANT DIDIER.

Maryland Agricultural Warehouse.
F. B. DIDIER & BRO.

(Successors to Hambleton & Didier,)

No. 97 NORTH PACA ST., NEAR FRANKLIN.

PARTICULAR ATTENTION.—The late annual Fair and Cattle Show of 1851, has again honored the Plow, which in their estimation merited a premium, viz: the celebrated Moore and Chamberlain Plow, better known as the Delaware. The undersigned have constantly on hand the above valuable Plow, together with others which received the Society's highest honors; the celebrated Thermometer Churn, which also received a premium, Corn Shellers, Cultivators, &c.

N. B. C. B. Rodgers' celebrated Steel extending Point and Share Plow, together with a new subsoil, on hand, to whose notice we respectfully invite the farming community.

N. B. We are agents here for the sale of Miller's celebrated Fruit and Ornamental Trees, the character of which needs no comment here. Catalogues for the same can be procured gratis, by calling on us in person or addressing us through mail.

F. B. DIDIER & BRO.

We are also agents for the sale of the Horseman's Hope, and Farmers Friend, a healing balm, which we guarantee to cure all diseases horses are heir to.

James Rungan's justly celebrated Genessee Fanning Mill, which requires only one-half the power necessary to operate other mills, and in cleaning has not its equal; for sale by us, the sole agents in Maryland.

Easton Fair, Talbot Co., Md., Nov. 15th, 1851, awarded us the first premium for our Steel Extending Point Subsoil Plow; also for Ox Yokes and Hames.

Farmers who think of purchasing Horse Powers and Thrashers, would do well to give us a call, having something new in this line, which we warrant in every point superior to any machine heretofore brought before the public, and sold for the low price of $110, complete, with the exception of belting.

The Chain Pump so universally admired for its simplicity and cheapness, for sale by us at the rate of 50 cts. per foot beneath ground and $3.50 for the necessary fixtures above; thus a well 20 feet deep would cost $13.50.

N. B.—We have in store Baugher & Frey's celebrated Vertical Sheller, warranted to shell 100 bus. per hour—price $50; Straw Cutters, all of the most improved and approved kinds, of our own and of Eastern manufacture—prices varying from $7 and upwards—the first price box will cut from 2 to 3 bus per minute, large size Cutters in proportion; Corn and Cob Crushers, Wheat Fans, Wheat Drills, Corn Planters, Tschudy Grain Mill, which we unhesitatingly pronounce the best Mill in use—we respectfully invite an examination before purchasing elsewhere; Chain Pumps, Water Rams, Patent Ladders, &c.

dec. 1 F. B. DIDIER & BRO.

C. B. ROGERS'
Seed and Agricultural
WAREHOUSE,
No. 29 Market st. Philadelphia,

HAS constantly on hand and is manufacturing all the most approved Implements of Agriculture. Dealer in Imported and American Grass and Garden SEEDS, of his own raising. Fruit and Ornamentel Shade TREES.

Also, Guano, Poudrette, Bone Dust, Native Phosphate of Lime, Soda, Salt, Chemical Residuums, and the most approved Chemical *FERTILIZERS*.

In addition to the great variety kept in Agricultural stores, he has a number of new and valuable articles, he is the inventor and the only manufacturer of—among which is Rogers' Cast-steel extending point Self-sharpening PLOWS, which is yet unequalled; twelve different kinds of CULTIVATORS, adapted to every different kind of cultivation and seeding, which only wants to be seen to be appreciated; Revolving Clover Seed *COLLECTORS*; improved horse and hand power Thrashers, Planters and Corn Shellers. All of which will be sold on the lowest terms, by

sept. 1-tf C. B. ROGERS, No. 29 Market street.

GUANO—GUANO.

500 TONS PERUVIAN GUANO, direct importation, and *warranted equal in quality* to any in the market. The Guano is put up in good strong bags, and is in fine shipping order. For sale in lots to suit purchasers, at the lowest market rates, by

WM. ROBINSON, No. 4 Hollingsworth st. near Pratt st. wharf, Baltimore, Md.

Also, PATAGONIA GUANO, BONE DUST, Building and Agricultural LIME, for sale on the best terms. je. 1-tf

PREMIUM IMPLEMENTS.

FOR the information of Farmers and Planters preferring PREMIUM IMPLEMENTS, we give the following list, remarking, however, that premiums on implements, like essays on agriculture, are not to be regarded according to the letter, but should only be respected as an *exterior*, requiring their own judgment and experience to decide properly relative to the merits of Plows and Machinery wanted, and the reputation of those from whom they may purchase.

ORDERS for any article in our line will receive PROMPT ATTENTION, and if allowed to exercise our judgment, will furnish implements of the *most approved description*, and *warrant* the performance.

R. SINCLAIR, JR. & Co. Baltimore.

Premiums received this fall as follows, viz:

For the best Sweep Horse Power 2 *premiums* awarded to SINCLAIR & Co.

Railway or Endless Chain Horse Power, *premium* to SINCLAIR & Co.

For the best Threshing Machine, 2 *premiums* to SINCLAIR & Co.

For the best Domestic Grist Mill, 2 *premiums* to SINCLAIR & Co.

For the best Broad-cast Drill for Scattering Lime, Guano, Plaster, Chemical Manures, Grass Seeds, &c., to SINCLAIR & Co.

For the best Corn and Seed Drill, 2 *premiums* to SINCLAIR & Co.

For the best Straw and Fodder Cutter, to SINCLAIR & Co.

For the best 2 horse Plow for the Md. river lands —the Patuxent, No. 10—to SINCLAIR & Co.

For the best 1, 2 and 3 horse Plows, 5 *premiums* to SINCLAIR & Co.

For the best Gang or Echelon Plow, to SINCLAIR & Co.

For the best Harrow, 3 *premiums* to SINCLAIR & Co.

For the best Grain Cradle, 2 *premiums* to SINCLAIR & Co.

For the best Corn and Cob Crusher, to SINCLAIR & Co.

For the best Chain Pump, to SINCLAIR & Co.

For the best Vegetable Cutter, to SINCLAIR & Co.

For the best Wheat (rolling) Screen, to SINCLAIR & Co.

For the best Clover Seed Gatherer, to SINCLAIR & Co.

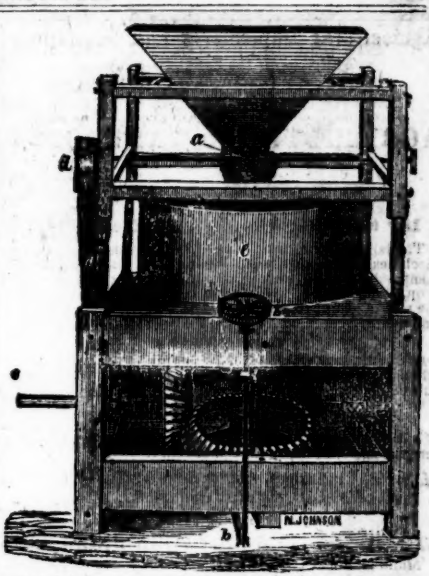
For the best Clover Seed Thrasher and Cleaner, to SINCLAIR & Co.

For the best Churn, 2 *premiums* to SINCLAIR & Co.

For the best Cultivator, to SINCLAIR & Co.

For the best Subsoil Plow, to SINCLAIR & Co.

And by the Marlboro' Ag. Society, for the *largest and best display of Agricultural Implements*, to SINCLAIR & Co. dec. 1



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